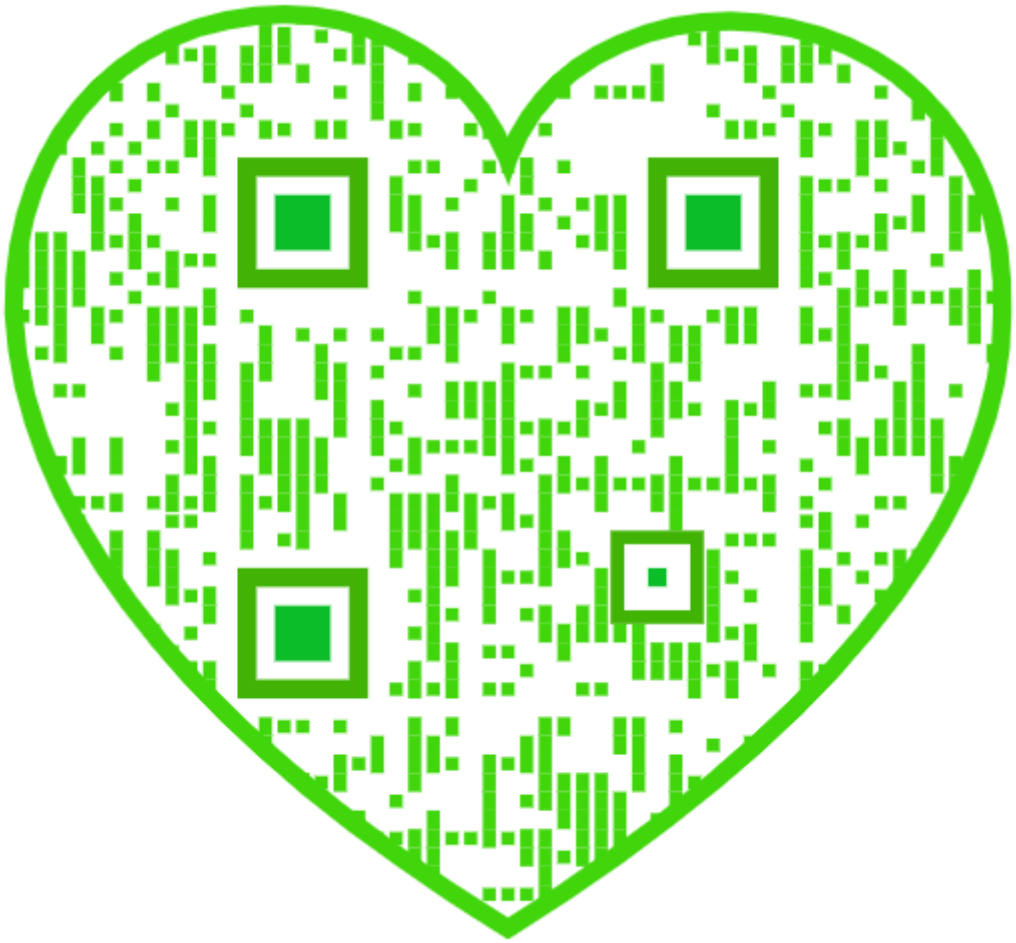

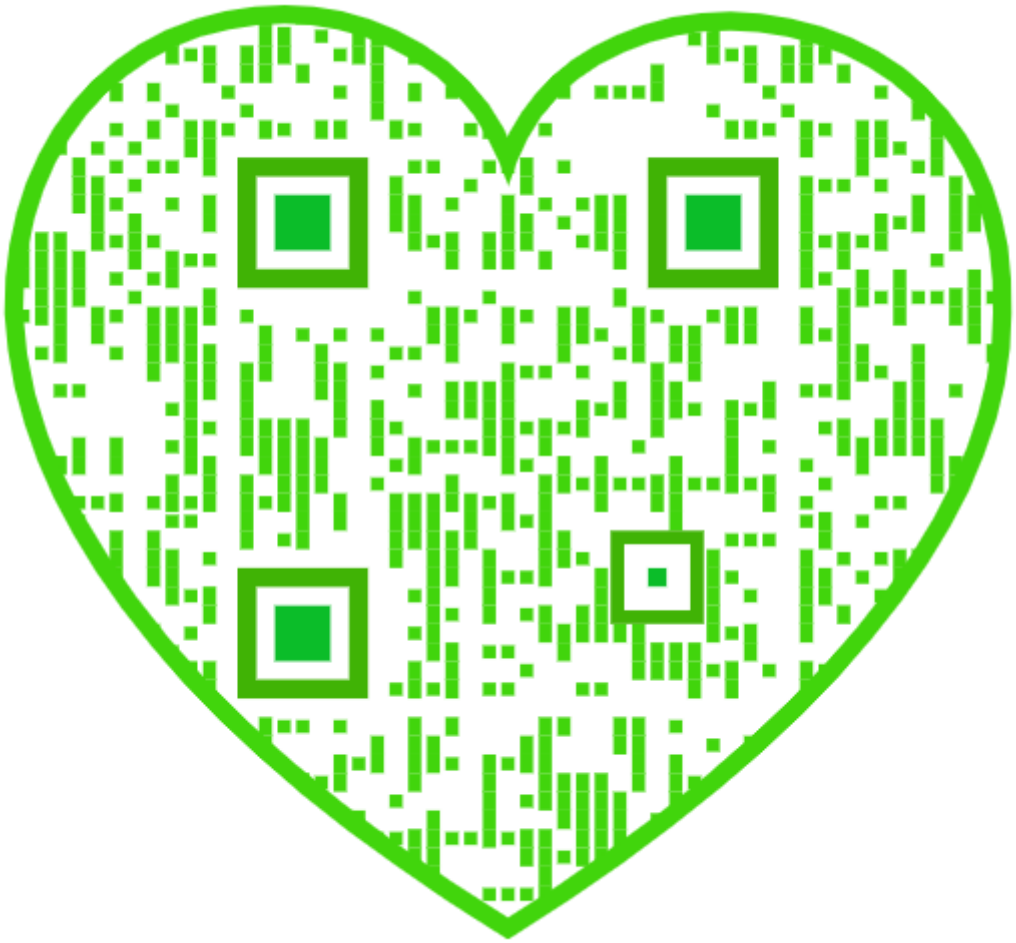

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The Rural Science Series

Edited by L. H. Bailey

RURAL WEALTH AND WELFARE

The MMCo.

RURAL WEALTH AND WELFARE

ECONOMIC PRINCIPLES ILLUSTRATED AND APPLIED IN FARM LIFE

BY

GEO. T. FAIRCHILD, LL.D.

New York

THE MACMILLAN COMPANY

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1900

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Dedication

TO THE THOUSANDS OF STUDENTS IN AGRICULTURAL COLLEGES
WITH WHOM I HAVE STUDIED ECONOMIC QUESTIONS
DURING THE PAST THIRTY-FIVE YEARS

This little volume is thankfully dedicated

IN REMEMBRANCE OF
MANY PLEASANT HOURS

GEO. T. FAIRCHILD

PREFACE

In giving these pages to the public I offer no apology for a restatement of fundamental principles always requiring adjustment to new life and circumstances; but economic literature has usually dealt too exclusively with the phenomena of manufactures and commerce to gain the sympathy of rural people. An experience of more than thirty years in handling such subjects at the Michigan and Kansas Agricultural Colleges, together with the expressed confidence of former pupils whose judgment I trust, has led me into the effort to bring the subject home to farmers and farmers' families in this elementary way.

I have carefully refrained from quotations, or even references to works consulted, for the obvious reason that such formalities would distract the attention of most readers from the direct, common-sense thinking desired, and render the style of the book more complex. I hereby acknowledge my debt to the leading writers of past and present upon most of the topics treated, not excluding any school or party.

The statements of facts I have taken from best authorities, with care to verify, if possible, by comparisons. Many data have been diligently compiled and rearranged for more exact presentation of facts, and the phenomena of prices of farm crops have been analyzed with especial care. The necessities of the printed volume have to some extent obscured the charts by reduction, but I trust they may be intelligible and interesting to all students of agricultural interests.

No attempt has been made to argue or to expound difficulties beyond a simple statement of principles involved, and the spirit of controversy has been absent from my thoughts throughout. Whatever bias of opinion may appear is without a tinge of bitterness toward those who may differ. I trust that men of all views may recognize in these pages the wish of their author to have only truth prevail.

In offering this volume to farmers I do not assume that all questions of wealth and welfare can be settled by rule. I hope to point out the actual trend of facts, the universal principles sustained by the facts, and means of most ready adjustment to circumstances in the evolutions of trade and manufacture. The business sense of farmers is appealed to for the sake of their own welfare. Several important questions of rural welfare have been touched only suggestively because

the limits of the volume could not admit of fuller treatment.

My gratitude is offered especially to Professor Liberty H. Bailey, of Cornell University, to whose suggestion and patient attention the existence of this volume is due.

GEORGE T. FAIRCHILD.

BEREA COLLEGE, KENTUCKY,
March 1, 1900.

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RURAL WEALTH AND WELFARE

INTRODUCTION

GENERAL WELFARE

Elements of welfare.— The welfare of communities, like that of individuals, is made up of health, wealth, wisdom and virtue. If we can say of any human being that he is healthy, wealthy, wise and good, we are sure of his satisfaction so far as it depends upon self. When a community is made up of individuals kept in health and strength from birth to old age, sustained with accumulated treasures, wise enough to use both strength and wealth to advantage, and upright, just and kind in all human relations, our ideals of welfare are met.

These are four different kinds of welfare, each of which is essential, and only confusion of thought follows any attempt to treat them all as wealth, however they may be intermingled and exchanged. Health is essential in gaining a full measure of wealth and wisdom, and perhaps in maintaining genuine character; but a healthy life gives no assurance of complete welfare. The facts concerning health in a community make a distinct sub-

ject of study for promotion of welfare, and we call it public hygiene. The science of education deals with ways and means of securing public wisdom. The science of government includes all facts relative to public virtue. So the facts by which we know the nature and uses of accumulated wealth in any community make a distinct study under the name economic science; it deals with certain definite groups of facts. To call everything good "wealth" and everything evil "ilth" adds nothing but confusion to our thoughts.

Mutual welfare.— Every human being in society is directly interested in the study of wealth as related to his own and his neighbors' welfare. No one can understand his relations to those about him in the family, the neighborhood, his country and the world without some understanding of the sources and uses of wealth all about him. His very industry gains its reward by certain means in society depending upon economic principles. His motives for accumulating wealth have a distinct place. His uses of accumulated wealth are a part of the general facts which make wealth desirable. So the study of wealth in society must be everybody's study, if each wishes to do best for himself or for his neighbors. In such study of welfare every one finds his interests completely blended with the interests of others. His existence is part of a larger existence called society, from which he receives himself in large measure and most of his satisfaction; to which he contributes in like measure a portion of its essential character and future existence.

The old idea that one gives up freedom of self for the advantages given by society has no foundation in fact, because we are born into our place in society without power to escape its advantages, disadvantages or responsibilities. The maxim "Each for all and all for each" is thoroughly grounded in the constitution of man; his needs and abilities enforce society and insist upon community of interests. Even personal wealth confers little welfare outside of its relations to other human beings. The whole progress of the human race tends toward acceptance of the clear vision of Tennyson, where

> "All men find their good in all men's good,
> And all men join in noble brotherhood."

Each stage in the progress of the conquest of nature to meet human wants, from the gathering of wild fruits, through hunting and fishing, domestication of animals, herding, and tillage of permanent fields, to the manufacture of universal comforts and tools, and to general commerce, has made more important the welfare of neighbors. Even the wars of our century are waged in the name of and for the sake of humanity. The study of individual welfare involves the public welfare. Welfare of a class is dependent upon the welfare of all classes. Wealth of individuals is genuine wealth in connection only with the wealth of the world. Welfare without wealth would imply the annihilation of space, of time, and of all forces acting in opposition to wishes.

Wealth in farming.— The subject of the following

pages is wealth, how it is accumulated, how distributed to individual control and how finally consumed for the welfare of all concerned. But special reference is made to the sources of wealth as a means of welfare in rural life, and to the bearing of definite economic principles upon farming, especially in these United States of America. Farming is, and must always remain, a chief factor in both wealth and welfare, and its relations to the industry of the world grow more important to every farmer as the world comes nearer to him. We cannot now live in such isolation as our fathers loved. The markets of the world and the methods of other farmers all over the world affect the daily life of every tiller of the soil today. Commerce in the products of farm and household reaches every interest, when the ordinary mail sack goes round the world in less time than it took our immediate ancestors to go as pioneers from Massachusetts to Ohio. It seems possible to show from the experiences of farm life the essential principles of wealth-making and wealth-handling, including the tendencies under a world-wide commerce. These every farmer and laborer needs for his business, for his home, and for his country.

NATURE OF WEALTH

Wealth defined.—If we look at the objects which men number in speaking of their wealth, we shall soon find the list differing in important particulars from the list of things which they enjoy. All enjoyable things contribute to welfare, but not all are wealth. Some, like the air and the sunshine, if never lacking, cannot be counted, *because no storing against future need is practicable;* but the fan that cools the air and the coal that gives heat are counted when they are stored as means of meeting future wants. If we could not foresee wants of ourselves or of those dependent upon us, we could not gather means of supply for those wants. If we had all wants supplied at a wish or a prayer, we should have no incentive to store. The pampered child whose every wish is met has no clear conception of wealth or its uses. Let him be without a meal, and he seeks provision for the future by an effort to save what is left over from his last meal and by exertion to add to his store in anticipation of want. Thus wants, to be met only by exertion, are the foundation of the universal ideas of wealth, and whatever we have stored as a provision against wants becomes our wealth. If hunger were our only desire, our wealth would include only stores of food, conveniences for storing, means of increasing the store, and means of utilizing the articles to be eaten. Each desire adds to the range of articles which may enter our list of objects of wealth until enumeration is impossible. None of these, however, will be stored as wealth beyond the limits of anticipated use:

if so stored, they add nothing to the supposed wealth. An isolated family, able to consume only thirty bushels of potatoes in a season, is not more wealthy from having three hundred bushels stored: the wealth is measured by actual relations to wants not otherwise supplied. Even in a populous city, the three hundred bushels of potatoes become a store of wealth only when other people need them and *are able in turn to meet other wants of the owners.*

Indeed, we soon come to estimate any object of wealth according to its power, directly or indirectly, to meet the first want that comes. A cherished memento of friendship may be ever so gratifying, and yet find no place in our account of wealth, because it can serve no purpose in meeting other wants.

Any object of wealth may cease to be counted, not because it has changed, but because wants have changed. The last year's bonnet goes for a song, because the fashion changes; the reaper rots behind the barn or at the roadside, because the harvester is wanted in its place. So the wealth in any object is limited by its relation to the present or prospective wants of its owner, and his control to meet these wants. The wealth of any community is its store of material objects suited to the current wants or fitted to exchange with other communities for more suitable articles of use. We estimate it only by thinking of uses in producing pleasure or preventing pain, its limitations in quantity to a certain range of wants, and its control for use or transfer by an owner.

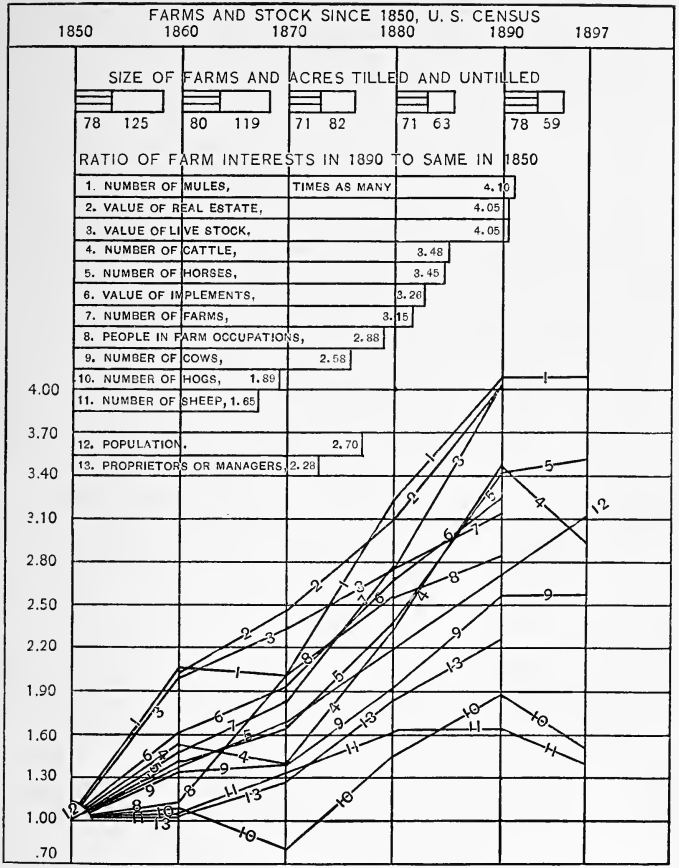
Wealth distinguished from power.— Wealth is not to

be confused with power of other kinds. Power may be for future exertion; wealth is the result of exertion. Power may take any form of welfare,—health, wisdom, character, as well as wealth. So no personal abilities can be counted as wealth, however useful they may be as means of gaining it. Jenny Lind's abilities as a singer may have been better than wealth; but exertion of those abilities in the United States enabled her to carry back to Europe wealth of which she had none before coming. The ingenuity of Elias Howe exerted upon the sewing machine has been an immense source of wealth and welfare to the world, but it alone could not secure him daily food. Your words and my music combined in a song fit to tickle the fancy of the multitude may transfer wealth to our pockets, but it was in neither the words nor the music, nor yet in the song, and still less in the power to contrive them. If wealth in material things had not been in possession of the multitude, the same sweet sounds might have given satisfaction to the crowds without an idea of wealth in the transaction. Much of the welfare of the world is from exertion of powers entirely independent of wealth. The chief joys of home are not measured by the wealth in our tenement. The chief welfare of society is only incidentally connected with wealth.

CHART NO. 1

Fluctuation of Farms and Farm Interests since 1850

At the top is shown the relative size of farms at the close of each census period, with the number of acres tilled and untilled. The lower part of the chart shows the changes in different farm interests, especially in the amount and character of capital employed and the number of people engaged in agriculture. Assuming the conditions of 1850 to be par, the increase or decrease is shown for each kind of live stock, the number of farms, the total farm population, and the number of farm managers, as well as the valuation of real estate and of live stock. To illustrate, take No. 4, the number of cattle, excluding the cows. In 1860 there were 1.5 times as many as in 1850. In 1870, on account of the consumption and disturbance of the war, the number was reduced to 1.4 times as many. In 1880 there were more than 2.3 times as many, and in 1890 there were 3.48 times as many. In a few instances the estimate for 1897, though not an accurate enumeration, is added for comparison. A careful study of these various changes will show that while the total population in 1890 was only 2.7 times the population of 1850, the total number of people employed in farm occupations of every kind was 2.88 times as great; although the number of independent farmers was only 2.28 times as great. The total value of real estate in farms was over four times as great, and the total value of live stock exactly corresponded. The number of cows, sheep and hogs had not kept up with the population; while the number of beef cattle and horses and mules had increased much more rapidly. The fact that the value of live stock had increased in much greater proportion than the numbers shows that there has been great improvement in the individual character of the animals. That the average wealth of farm proprietors is more than three-fourths as large again is shown by comparison of the number of farmers with the value of the farms. That the number of mules, cattle and hogs actually decreased between 1860 and 1870 indicates the enormous consumption of the armies in the Civil War.

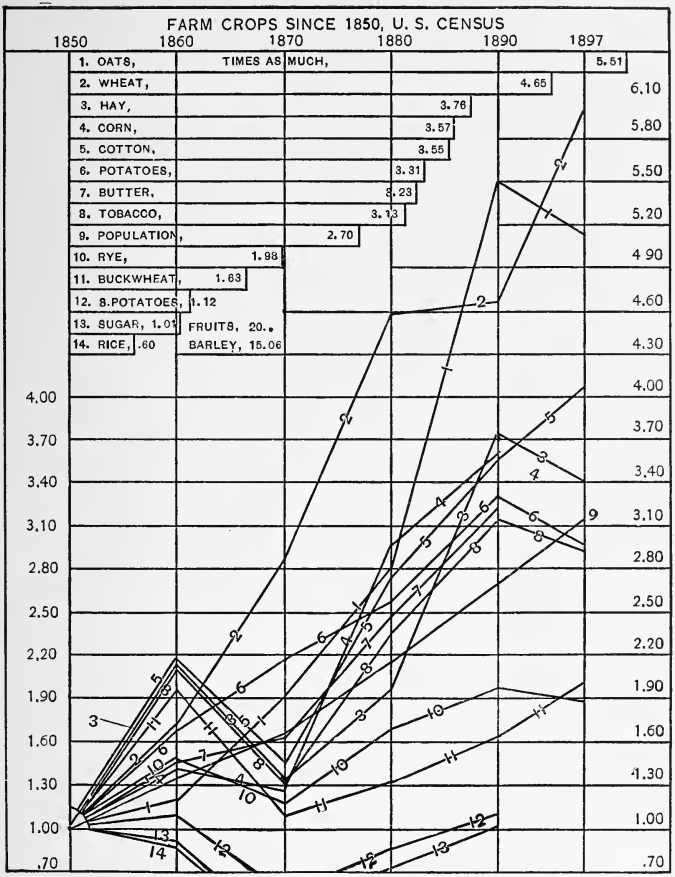


I. Showing the rate of increase in farms and farm live stock as compared with population. See explanation, p. 8.

CHART NO. 2

Progress of the United States in Farm Crops since 1850

This chart indicates to the eyes facts shown by the census reports as to the relative increase or decrease of certain staple crops in comparison with the population. Assuming the conditions of 1850 to be par, the several lines indicated by numbers show the ratio of the several crops to the crop of 1850. Thus the wheat crop in 1860 was nearly .75 greater than in 1850; in 1870 it was 2.87 times as great; in 1880 it was nearly 4.6 times as great; only a little greater in 1890, but in 1897 was nearly 6 times as great. It should be remarked that the census returns are founded upon the crop of the previous year, and therefore, will not exactly correspond with current estimates. At a glance it will appear that rye, buckwheat, sweet potatoes, sugar and rice have nowhere nearly kept up with the increase of population, while all the other crops have been considerably in excess. The barley crop could not be shown upon the chart for want of room, but is more than fifteen times as great. The cultivation of fruits is estimated to be twenty times as great, although the census returns give insufficient figures for accuracy. It is evident that the people of the United States demand a better living, as well as raise more profitable crops, than in 1850. Some striking illustrations of the effects of the Civil War are seen in the falling off of many crops during that period. Only oats, wheat and potatoes increased beyond the increase in population. Most of the others actually diminished; and the staple products of the southern states prior to the war have scarcely as yet regained their previous standing. This is accounted for in part by the immense destruction of capital, but in larger part by the entire change in conditions of plantation cultivation.



II. Showing the rate of increase in total crops for the given period.
See explanation, p. 10.

Wealth in material objects.— Our attention is called to wealth in comparing two material objects of desire. One has more uses, more important uses, more rare uses, than another; or one is less easily obtained than another. In either case we prize that one in store, as the more important. We compare two farms, as material aids to different owners, and call both wealth in different degrees. We note the condition of two countries as to all the machinery of industry, and know that one has greater wealth than the other. We compare the accumulations of this generation with those of our fathers, and rejoice in our advance in wealth as one important form of power to gain a genuine welfare. Thus, in comparing our country's inventory by the census of 1890 with that of 1850, we find that while its people are only 2.7 times as many, there are 3.15 times as many farms of exactly the same number of acres, though more of each is cultivated, and that the value of property used in farming is more than four times as great; so we know that the farmers have increased in wealth and welfare as compared with our fathers. See Charts I and II.

Rural wealth analyzed.— A brief analysis of rural wealth in any established community will help to understand the meaning of the word and its relation to welfare. First may be named the farm fields and plantations brought by exertions continued through long years from raw forest or prairie to present tilth and productiveness. An English farmer, when asked how long it took to establish a certain permanent pasture, replied, "Three hundred years." Second, all fences,

drives and farm buildings, for convenience of handling and storing produce and stock. Third, all the tools and implements of the trade. Fourth, all domestic animals of every kind, and all attendants of their sustenance and growth, including feed and manure. Fifth, all contrivances for marketing and preparing for market. Sixth, all highways between neighbors and toward market. Seventh, all local elevators, stockyards and depot facilities. Eighth, the homes, with all material comforts and utensils. Ninth, any store of provisions in cellar, pantry, smokehouse or bin. Tenth, all personal belongings for clothing, adornment and enjoyment. Eleventh, the family libraries and associated treasures. Twelfth, any actual store of gold, silver or other current wealth available for future wants. This does not include notes, mortgages, bonds, or any other promises to pay, nor certificates of stock in any business enterprise, because these are mere titles to wealth supposed to exist elsewhere,—as distinct from the wealth as the deed is from the farm. Thirteenth, any peculiar advantages of location, scenery, pure air, pure water and agreeable temperature, that are controlled by owners for personal advantage or enjoyment, and can be objects of desire to others. Fourteenth, any "good will" attached to, and part of, particular farms, due to long established methods and facilities in preparing or marketing produce. If such "good will" is attached to a person rather than to the place, it is not wealth, but power.

The last two are seldom distinctly enumerated by the assessor, yet they are clearly estimated in any

exchange of places or transfer of titles. They are owned, used and transferred like other forms of wealth, and save future exertions to obtain them. All these are wealth because they contribute to welfare through being accumulated materials to meet future wants, and are to be measured in any estimate by their relation to the wants they will satisfy and the exertions they will save.

Future wants certain. — Wants and exertions are readily seen to be at the foundation of all ideas of wealth as indicated above. If we are uncertain as to the continuance of any wants or uncertain as to the conditions for meeting those wants, we stop accumulation of materials for satisfying them. Exertion stops unless the satisfaction to be gained by our effort is foreseen with a reasonable certainty. The farmer is never absolutely sure of returns for his labor upon the cornfield; but he is reasonably certain, and is absolutely certain that the crop will not come without labor. This assumed continuance of individual wants and their relations gives the grand motive for wealth gathering.

The means of protection and support for physical life will be needed by ourselves and our children. Tools of better form and machinery of better manufacture will be needed to reduce exertion in future. Reduced exertion for a given satisfaction will mean a fuller supply of things we are going to need still. If these wants are fully met, we are going to have leisure to satisfy larger and higher wants. It is the certainty that each advance of wealth will bring advancing wants

to consume more wealth, that gives a genuine motive to activity in gaining wealth, i. e., in accumulating the things to be used. The degree of uncertainty in all future plans leads to over-estimating the importance of gold, diamonds or any forms of wealth that can most easily be transferred between places or individuals, or be turned to account in each change of necessities.

Ownership. — The importance of wants and exertion emphasizes the importance of the individual self in all ideas of wealth. The *ownership* of one's *own* abilities and their products is absolutely essential to his care for accumulation, and that care is in proportion to his security in such ownership. Directly or indirectly, every exertion and every sacrifice must depend upon confidence that it will bring its object; but wealth-getting has no object without control, in some measure, of results. This fact makes individual ownership an essential to the highest exertion, a natural sequence to the right of liberty.

Property rights are grounded in the general and individual welfare, as shown in human nature and in the progress of the world along the line of protection to property. Those communities are most happy which best protect individual property. As J. E. Thorold Rogers remarks, "Sacredness is accorded to private property, because society prospers by it." Even theorizers who denounce individual property-holding found their argument upon the equity of individual rights in property. War is less harmful than anarchy, because it ensures a measure of control. Slavery has sometimes been less injurious than war in giving security to

enjoy a portion of self. But a conquest of freedom by bloodshed is worth its cost in self-control. Civilization advances as individual responsibility for property, as well as everything else, is recognized.

Christianity is ideally practical in upholding every man's right to self-control in the interest of all. It distinguishes equity from equality in distribution of all good, wealth included. Public property is rightly public when the wants and energies of all the community are best provided for by such common ownership. Proof in each particular case is essential against the presumption that individual needs are the best impulses to provision for welfare. Even common property is limited necessarily to the numbers who can use it. No property or wealth can exist for anybody without the control of some human individuals for whom it is accumulated.

Wants individual. — We are likely to lose sight of the essential individuality of wants and exertions which make wealth possible, because in any community exchange of services modifies the direct relation of each man's wants to his accumulations. Assuming that others, wanting food, will exchange clothing for it, one man stores food alone, but in quantities far beyond his own need, measuring its relation to all his material wants through the wants and exertions of others. He feels even more sure of the continued activity of wants and powers among a multitude than if he had but one neighbor; but individuals, after all, must need his products and exert themselves to meet the need, or all his calculations fail.

Progress in welfare.—Economic progress must show a larger welfare to individuals of the community. The familiar figure by which a commonwealth is compared to an animal organism fails to include the important fact that the individuals of the commonwealth furnish the only reason for the existence of the commonwealth itself, as well as its only means of existence. The cells of the animal, or even the most important organs, have no reason for existence in themselves. Each individual man furnishes the reasons for his activity, and the needs of individual men furnish the only reason for having a commonwealth.

We can speak of progress, then, only when these individuals secure a better use of wealth in some way. It may be by accumulation through saving from the full years for the empty, as older communities can endure a drought with little suffering, while pioneers are ruined. It may be by an increased product for a given exertion, as illustrated by every labor-saving implement upon the farm or in the factory. It may be by lessening exertion for a given product, as in the devices of kitchen and dairy to make tasks lighter. It may be in better distribution of the total product through readier and fairer exchanges of services or products, as happens with every improvement in transportation and every means for fairer understanding in a bargain. Lastly, it may be in more economical expenditure for common wants, as in maintaining government machinery. Usually, progress has been marked along several of these lines at once, if not all of them. There is reason in the statement of Charles Francis Adams that the last

century far exceeds the gain of a thousand years before.

Production, distribution, consumption. — Full consideration of rural wealth as related to welfare must first give the principles upon which wealth is produced, including exchange with all its machinery; for the marketing of produce is today one of the chief steps in securing wealth by farming. The thrifty farmer of today is the man of most business tact and energy, who uses most approved means of raising, handling and marketing his goods.

It also requires a careful study of principles upon which any product of exertions, where more than one person has contributed toward the whole, can be fairly shared between the producers, however they have helped. A farmer is as thoroughly interested in problems of rent, interest and profits, if not in wages, as any other worker for wealth or welfare.

It further involves the study of economic uses for wealth, private and public, since no wealth has found the true reason for its existence till the uses to which it is put are known. This includes all questions upon the economic functions of government, the ends to be served, and the raising and handling of revenues. If any patriots need to know for what, how and in what measure their country is dependent upon their own resources, it is the farmers, whose homes make the bulk of the land we love, whose children furnish the bone and sinew of industry, and whose interests are most sensitive to misdirected energy in public administration.

Security in stable government. — Agriculture, of all

industries, can flourish in that country alone where personal and property rights are fully understood and respected, where claims are equitably adjusted by a stable government, and where taxes are properly apportioned and revenues economically expended.

PART I

Productive Industries: Analysis of Aims, Forces, Means and Methods

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CHAPTER I

AIMS OF INDUSTRY

Production defined.—A very little thought shows that men produce nothing in the sense of creating. All production is simply overcoming obstacles to satisfaction of wants as we find these obstacles in space, time and form or substance of natural objects. In doing this we are confined to mere ability to move things. The very highest effort of man's energy today but proves the saying of Lord Bacon, "All that man can do is to move natural objects to and from each other: nature working within accomplishes the rest." This is fully illustrated in farm operations. The bringing together of soil, seed, sunshine and shower, according to their natures, secures the product of nature—a crop. Moving food and water to the steers, or the steers to food and water, under proper conditions of warmth, air and exercise, produces beef. To know how and when and where to move things so that nature may meet our wishes by what always happens under the

same circumstances, would be to have all the arts of life; in short, production is the art of moving things. But we distinguish different kinds of production according to the direct results expected from our motion, as reducing space and time, modifying the form, or changing the substantial qualities of things handled.

Transportation in production.— The change of place necessary to bring together wants and those things which satisfy them is a method of producing wealth most apparent everywhere. The bringing of wild fruits from the forest or the swamp to the home gives them worth. The mere transportation, change of place, gives them an importance they did not have on the trees or bushes. In this transportation we put the energy necessary to take grain from the fields all the way to the bake-ovens, and finally to our mouths, or to carry the milk from the stable or yard in pail, can, wagon, train, delivery cart and bottle, to the lips of the child whose life it maintains. Every kind of material or force expended in this process of overcoming space is used in the idea that the object is worth the expenditure in the place finally reached. If the motion stops anywhere along the way, the wealth is not obtained, or at least is held only in expectation until the motion can be completed. While each of fifty individuals may give a hand, and pass his claim to the next for a consideration, the wealth is all the way increasing in anticipation, as the object comes nearer its use.

In this progress time as well as space is an important obstacle to be overcome, and we employ all means of increasing speed, or preserving against what we call

"the ravages of time," i. e., the operation of injurious forces acting in time upon most material substances. The methods employed for storing, curing and forcing to maturity the various forms of food needed in a community are aimed at meeting this obstacle, and add to its final worth; indeed these may be the means of giving value to all the other efforts in transportation, as in moving beef from Kansas City to New York, or fresh fruit from San Francisco to Boston.

In the same process of putting things where they are needed, all merchants are engaged. Without the store, the order upon the shelves, the ready attendant and his despatch in meeting your demand, the pounds of sugar or salt essential to your comfort could not be had for love or money. These efforts are an essential part in the motion between wants and objects to satisfy them. Much of this kind of motion we include under the name commerce, though that word more directly implies the exchanges involved. The machinery of commerce is chiefly the means of bringing things wanted to the people who want them.

Much, however, of the exertion required in all industries, especially in farming, is simply "to fetch and carry." It will emphasize this fact to study, while you eat a piece of cherry pie, the processes involved in bringing it from the treetop, grainfield, dairy and canefield, through mill and store and pantry and oven, to your plate. Transportation cuts a tremendous figure in production of wealth. In the first stages of social life it is almost the whole. The hunter talks of "bringing in" his game. Australians, Hottentots and Digger

Indians lived by carrying themselves from one supply of food to another.

Transformation in production. — Much of the material gathered by us needs some change of form to suit our wants. An ax-helve has in it the original wood of the young hickory brought from the forest, but its form is fashioned by effort with ax, drawshave, scraper and sandpaper, until it satisfies the judgment of an expert chopper. This transformation is employed in any industries where wood, ivory, the metals and other minerals are shaped by tools, or by molding, or pressing or bending, to our wishes. Most fabrics are materials put into form. The word manufacture covers most of such work where materials are manipulated by shaping; but it also includes many operations with a different aim, to change the substance itself.

Transmutation in production. — Men have found that two metals, tin and copper, melted together produce brass, different in qualities from either. Farmers have for many centuries contrived, by keeping nature's forces under control in the wheat field, to combine certain elements of the soil, including its moisture, into grain. The single seed has multiplied a hundredfold through being placed in favorable conditions, with the raw materials at hand in the fertile soil.

The process of maintaining animals with suitable food for the production of milk or flesh is similar. The combination of flour, water, salt and yeast, by heat, first mild and then intense, into a loaf of bread is a good illustration of a change of qualities by rearrangement of the elements of a substance. It is sometimes

called transmutation, and comes the nearest possible to creation of material things. The chemist's laboratory exists for making such new combinations, and many of the arts produce materials, like steel, which would not exist without such combination. But many have seen in the art of agriculture a most prominent illustration of transmuting coarser elements into products adapted to human wants for food, shelter and adornment. All such work, however, is done by bringing objects and forces into such contact that chemical or vital changes will take place while we wait.

Production extended. — In all these three directions, or in any combination of them, transporting, transforming and transmuting materials, men seek the production of a supply for meeting anticipated wants, and so contribute directly or indirectly to welfare. No one way of producing what men need, where they need it, and when they need it, has any superior claim to the name production. All are making the material yield up welfare to the one who needs it, and produce wealth just so far as their services are necessary in bringing the welfare. If ever any step in the process becomes useless, it ceases to be productive of wealth and becomes waste. The inventive powers of mankind are always at work to shorten the processes and hasten the advantages of production. Men study the minutest workings of nature to find the conditions under which she does her part of the work. The application of such minute knowledge is a chief part of every art. This is also the object of science; for, as Guizot says, "It only began to have a well defined existence when it confined itself to

seeking the 'how' rather than the 'why' of nature's workings." This purpose sustains in the United States more than fifty agricultural experiment stations, united in a great organization, to find how the natural forces used by farmers do their work.

This prophecy of a noted economist is warranted: "Probably the greatest economic revolution which the youth of today may in his old age behold, will be found in this all-important branch of our industries." When we know how nature works, we can adjust our little motions in time and place to promote that work; we shall have the art of moving things to suit our needs. Nothing can be truer than Tennyson's line, "We rule by obeying nature's powers."

CHAPTER II

FORCES IN PRODUCTION OF WEALTH

Nature. — When men learn to meet their wants by exertion in accord with nature's ways, they are said to use the forces of nature in production of wealth. Every accumulation of materials for satisfying future needs implies some control over natural objects. If advantage is taken of natural motions or other activities to bring about larger accumulation, the man whose plans secure this has gained control over, and so property-rights in, the natural force which he has harnessed. The wind caught by a sail and the water controlled by a dam contribute to the power, and indirectly to the wealth, of the man who contrives to make them move things for him. The directive actions of men necessarily appropriate the natural objects which they use, together with all the qualities of those objects.

Energy. — Human exertion produces wealth, as we have seen, whenever it anticipates and provides for future wants by securing at hand the things to be used. So far as this anticipation includes control of forces or qualities in nature, these natural agencies contribute to wealth of individuals or communities. So voluntary human exertion is combined with involuntary forces of outside nature to give wealth. No amount of

gold in Alaska is wealth until some human ability has appropriated it to human uses; but the mere fact of locating a claim for mining purposes gives the prospector advantage over any other man because of his foresight. So every activity of nature may become a factor in wealth by human ingenuity in making it useful.

Natural forces. — Such natural agencies for producing wealth are seen in the simple properties of material bodies, such as the metals or woods or grains or fruits or flowers possess. We secure these properties for our uses. Gravity, sound, heat, light, electricity, chemical affinity, crystallization, even life itself, are names for certain forms of energy in nature which men are using more or less to meet their wants. Whenever exertion is needed to provide for using these, the thought of wealth is connected with the forces themselves. The fish in the sea and rivers become wealth to one who has caught them, and even more distinctly the property of the community which has protected them in breeding. Sunlight may reach all alike in welfare, but the man who has contrived to make it print pictures for him has made sunlight into wealth in the picture. Equally so the farmer's energy and contrivance use the properties of soil and climate and the vital energies of seeds to make wealth in a crop.

Control for welfare. — As each individual worker gains control over any of these properties or forces he advances in wealth and welfare. It becomes his own means of meeting wants. If all individuals in a community share in such control, they think of the good

things as part of the general welfare, and do not enumerate them in anybody's wealth except when comparing their own condition with that of another community. Advantages of this kind constantly tend to become more universal, and so to count very little in individual wealth. Many advantages of civilization today belong to all the world alike, so that nature seems to meet our wants gratuitously; but the story of progress shows that these are gifts inherited from the wealth of past ages. The human exertion which they once cost is overlooked in the ease of the present. Mere fire was once a treasure to be cherished and kept at much expenditure of strength and foresight. Now we kindle a fire so easily that nobody thinks of it as a part of the world's wealth.

Land as a force. — Land represents a combination of natural energies and properties so important as to be named sometimes as a distinct force in production. It implies, first, needed space for various kinds of exertion in both country and town. Second, it includes all mineral, vegetable and animal bodies that are found above, on or under the surface. Third, it is soil, an essential part of a farmer's equipment in using nature's processes of growth.

As most of these properties of land can be put to use only by repeated and continued exertion in the same place, a large portion of the earth is necessarily apportioned to individual control, i. e., to the ownership of those who can direct its uses, and so it becomes wealth. The sea in most of its uses to men requires no such local control, and so is not owned by a nation even;

but the harbors, ships and wharves, the oyster-beds and fishing banks, soon become the property of some body of men that will make and keep them useful. Even a pathway over the high seas may yet be controlled for the safety of the huge steamers that dash across.

Land, except when used for absolutely universal welfare, must be under individual control, and even then other individuals may have the right of way because of its necessity in the common use. Peculiarities of property in land arising from limitations in quantity or quality will be spoken of under *Scarcity Prices* and *Rent*. They differ from similar questions as to any other form of property only because this form of property seems more permanent. Any force of nature brought under control by individual effort contributes to wealth of individuals till all gain equal control. Peculiarities of climate affect the quality of wool, cotton, grains and fruit, and even the beef and mutton raised under it. But these effects we connect with the land. Such peculiarities also affect manufactures of various kinds, and so location has value.

Effort for gain.—Voluntary human effort is always made with the expectation of gain from its exertion; otherwise it would not be made. As Guizot says, "Our ideal is to procure the maximum of utility with the minimum of effort." The exertion is always counted in the cost of any product, whatever the natural forces employed. If the crop fails, or the product is unsalable, the effort has lost its expected reward, and prospective losses are estimated with more or less care

in judging whether a product is worth the exertion. The half crop of a droughty year costs as much as the full crop of a plenteous year, and compensation for the loss is expected from the surplus of the full crop.

In estimating the exertion given, all human energies are counted, whether they belong to the present, like muscular power, good eyesight, quick intelligence; or to the past, like dexterity from training, superior knowledge, accumulated tools, established character. If the immediate exertion is most prominent, the word labor includes the whole exertion. If tools and machinery are used, capital is a contributor to the product and takes its share. If skill or knowledge or character become important, personal attainments are a chief cause of the product, and so a chief claimant in the reward.

CHAPER III

LABOR DEFINED AND CLASSIFIED

Labor defined.—Exertion of any kind for meeting individual wants we call labor, whether it simply gathers food from the forest, or contrives the most intricate machinery for satisfying wants that may take years to grow. Exertion that has no end beyond itself, no matter how severe it may be, we call play, and consider it important in public welfare only as it aids in health and morals. Labor is separated, too, from all exertions to destroy or injure the welfare of others, if we can see their object. Any person claiming to labor professes to have given his exertions for the satisfaction of somebody's wants without doing violence to the welfare of others in the community. Whenever we do not assume this we concede a state of war, violence and destruction taking the place of production and accumulation. These may require exertions usually classed with labor; but are punished instead of being rewarded, unless we can establish their final advantage in a larger welfare for humanity, or in defense of society.

Productive labor.—The various classifications of labor serve merely to call attention to peculiar relations implied in the results. If exertion results in giving additional wealth, or power to produce wealth, it is called

productive labor; but if it contributes only to immediate comfort or pleasure or safety it is called unproductive. The distinction is useful so far as it enables us to be prudent in adjusting energies to meet real wants. All labor is maintained by the product of exertions. Any labor expended without a product must be provided for by an increased product from some other form of labor. A farmer may sustain life upon the food he raises; but the wife who makes his house a home cannot live on the product of her labors. She may add to the value of some products directly, as in turning milk into butter, and raw materials into palatable food; but her chief energy may be in getting satisfaction for the household out of materials gained by her husband. Both are essential to the welfare of either, and prudence requires a proper adjustment between them. A force of physicians may be needed to keep a community in working condition; but if a whole community tried to live as doctors some other community must furnish the material wealth to sustain them.

Any increase of labor upon material products, either directly or indirectly, may increase ability to meet future wants, while increase of labor upon present uses of wealth may diminish ability for the future. The wealth of a community is the product of all the labors that contribute to make material nature useful. This classification is important in studying the question of productive consumption of wealth, but does not decide which gives best results. It is a serious error to assume that the worker, whose labor is directly applied to materials, gives to our wealth all its value. If several men are

building a house, one may contribute as much to the building by cooking for the rest as if he worked in turn in the construction. In the same way all the household, if well ordered, aid toward the result of their united labors. The physician who shortens the illness of a farmer contributes his share toward raising the farmer's crop. The lawyer who makes property safer, and the minister who gives stronger motives for exertion, are sharers in the force that brings the product.

Physical, mental, moral labor.—The classification of labor according to the powers employed serves to call attention to the wide range of exertions rightly classed as labor. If the exertion is chiefly muscular, labor of hands, shoulders, legs or any part of the body, it is properly called physical. If the main effort is that of the intellect in planning, inventing, contriving ways and means, or in remembering, counting or thinking of any kind, it is just as truly labor, but mental. If the chief exertion is in the good will that resists temptations, guards interests, controls violence and folly, secures order and devises liberal things for society, the labor is moral. Moral labor is often recognized in wages, faithfulness being more important in some services than in others, and paid for. Mechanical devices for promoting honesty or watchfulness may save, in part, moral labor.

This view of labor helps us to see the wide range of efforts that unite in production of wealth, since all the energies of a man may be employed in his work. The successful farmer is one who makes the most of all his abilities—his muscles, his mind and his heart—and

his hard work is far from being confined to his hands. The three kinds of labor are combined in some proportion in every life, but the best and most productive life has most room for hard thinking and self-control.

Operative, executive, speculative labor.—In the advancing complexity of society a still more important classification of labor is apparent. If a man's effort of any kind is simply to follow directions in an established routine, it is called operative labor, and the laborer becomes an operative. He works usually by the day, hour or piece, under a foreman or overseer. Beyond the task set for him, he has no thought nor will. Over him is a director — the foreman, overseer, contractor or boss — whose chief effort is to carry forward to completion some plan committed to him as a trust. The foreman's labor is largely mental and moral in adjusting tasks and keeping the operatives, "the hands," well employed. This is well named executive labor, and requires peculiar abilities and character.

Still farther away from the mere task is the effort that devises the plan, adjusts part to part, decides upon materials suitable for each part, establishes the ideal of excellence for every part and for the whole, and foresees its actual uses. Invention of every kind illustrates the exertion of foresight in planning, but such exertion is not confined to technical invention. The farmer who lies awake nights to plan his year's work so that he may have the largest returns for his undertakings in marketable products, gives the same kind of effort as the inventor. A good name for this is speculative labor,— an exertion to foresee and provide for future needs of society.

In much of farm life all these are mingled: the same man devises the plan, executes his own ideas, and performs the tasks himself. But every one realizes the difference of success growing out of the planning. Many a good man needs to follow another's plans, and not a few "work better for others than they can for themselves." In some great undertakings the projector and planner, the contractor and overseer and the worker of details are necessarily separated. This may be well illustrated in the construction of a great building, for which an architect gives all attention to a plan, and may require a considerable force of assistants and draftsmen to embody his ideas on paper; then contractors, one or several, secure material, employ men and direct them in placing materials in form and combination to suit the plans; but a host of workmen move as directed at the will of a foreman to pile brick, mortar, stone, iron or timber according to the plan. The labor of the architect makes possible the entire structure—makes the work for all that enter into his labors.

This classification into speculative, executive and operative labor helps to a fair estimate in sharing the proceeds of combined labors, and gives a proper importance to the inventive and foreseeing energy which causes the growth of civilization. *That form of exertion which has done most to meet the world's wants is speculative labor.*

Invention in farming.—A capital illustration of speculative labor, productive in the highest degree, is the invention of reaping machinery. The inventor has gained riches by his contrivance, but the world has

gained far more by his foresight and ingenuity. Similar energy has been put into all labor-saving machinery, and still plays an important part in devising the best uses for it.

Every farmer has a similar need of planning for every field he plows. There is a certain draft for each horse, a certain speed for the plow, a certain adjustment of harness to the team, which gives a full return for the force employed. A failure to find this causes waste. All the effort of scientific research into causes and conditions of growth or disease of plants and animals is speculative labor, out of which the next advance of agriculture must come. The mere operative power of a laborer can be supplanted by brute force or by machinery, but nothing can ever supplant the intelligent foresight that invents, plans and devises the end to be reached, and the ways and the means for reaching it.

The very foundation of any success in farming is clear foresight and distinct planning for a succession of crops, each to be tended, harvested, stored and marketed in the very nick of time. The best energy of every farmer is properly given to finding what crop to raise, how and when to have it ready for the world that is going to need it. He best meets his own daily wants when "Mr. Contrivance" stands by him in all his efforts. This contrivance is the chief exertion of a successful farmer's life.

CHAPTER IV

CAPITAL DEFINED AND CLASSIFIED

Capital distinguished from wealth.—Whenever material wealth is used not directly in meeting present wants, but to produce more wealth suited to future wants, it is called capital. Any store of good things devoted only to meeting wants as they come is thought of as wealth, as well as possible capital, since at any time it may be made the means of creating other wealth to more than take its place. The distinction grows wholly out of the uses of wealth, not its forms. A horse used, or to be used, as a force in production by drawing loads is counted as capital; but if used for mere pleasure-riding is only wealth, which leaves no material return when consumed. Thus the same horse may, in the hands of a breeder, a trainer, or a liveryman be capital, but in the hands of a fancier or a pleasure seeker be only wealth, to be used as wanted.

Wealth in dwellings or public buildings constructed for enjoyment rather than protection of a working community is not capital, and may be destroyed by fire or storm without serious disturbance of industry. The loss is bravely met, the hardship endured and extra energy put into restoration. A farmer may lose a fine house and by living in less comfort for a time restore it, while

the loss of his teams or his barns may cripple his industry. In the great Chicago fire of 1871 the wealth destroyed is estimated at $50,000,000, while the loss of actual capital may have been only $5,000,000. An energetic use of the capital remaining wrought apparent wonders in the restoration of wealth. Indeed, the total capital of our country is supposed to be only three times the annual product of industry, though a century of labor could not restore it if destroyed entirely, because effective tools would be wanting.

The capital of an individual is such a portion of his wealth as he is using to maintain and increase his wealth. The capital of a country includes all the farms, so far as they are made such by improvements directly or indirectly, including all ways and means of communication and transportation, for roads contribute to all goods drawn over them; all buildings devoted to systems of production, including necessary protection of laborers themselves; all tools, machines and contrivances for power; all animals employed in connection with industry; all materials of construction or growth; all materials consumed in securing and maintaining power, as fuel, lubricating oil, etc., or in performing operations of manufacture, as dye stuffs; subsistence for the workers, the brutes they use, and the families which keep up the life and comfort of the people; the necessary stock in trade, that all wants may be readily supplied; all the machinery of trade for ready transfers, including any actual wealth in form of money; all the governmental machinery for protection and maintenance of order, as a first essential to wealth-producing.

All these are more simply grouped in their different relations to labor under three classes: first, as sustaining labor by food, clothing, protection and material on which to work; second, as aiding efficiency by tools, machines and stored up forces; third, as stimulating exertion by reducing present anxieties and arousing more far-reaching plans for future undertakings, illustrated by possession of satisfactory stocks of goods or comfortable homes for families.

Capital a time-saver.—All these forms of wealth serve in production by extending the possible waiting between an effort of any kind and the greater satisfaction secured by it. No community could begin farming as a business until it had secured housing and seeds and tools and provisions in some form for most of a year's sustenance. All the capital that constructs a great thoroughfare is used in getting ready to satisfy wants in many future years. Capital furnishes subsistence for laborers of every kind during those years of waiting for a product. This is true capital, because the object of its use is a greater product of wealth; but the product may be long delayed. So all accumulated wealth in every form represents sustained labor during the past. Professor Taussig estimates the accumulation of subsistence in all existing goods at five years of labor for the community. The total value of farms in our country is just about five times the average annual product of the farms, though a large portion of the land is unused.

Capital circulating or fixed.—A further distinction is desirable between capital in food, fuel or stock in trade, which may be turned at a single use into new wealth,

and capital in buildings, bridges, roads and farms, which may be used many times in adding new wealth before they entirely disappear or give place to new forms of capital. The first is called circulating capital, and the last fixed capital.

The degree of permanence in fixed capital is indefinite of course—even drains vary in permanence—and the line between the two is not always easily drawn, yet the distinction is real. Most men distinguish "the plant" in any enterprise from "the current supplies," and realize that some fit proportion exists between them. A farm well equipped can not be handled to advantage without a proportional investment in current supplies. Many a renter cannot pay his rent for want of means to work his farm profitably. If the farm were given him, he would still be hampered by the same lack of consumable goods to turn at once into larger products. Many a "land poor" farmer would gain at once by exchange of acres for more "current supplies" for his farming, such as food for help, feed for teams and stock, seed or fertilizers for his crops, or young stock to consume the raw product of his fields. In the fourteenth century the stock of European farms was worth three times the value of the farms. Similar conditions are found now in some newer portions of the United States. It is impossible to estimate exactly the existing ratio between fixed and circulating capital from statistics at hand. Farmers in older, more developed regions can use, without suffering, a larger per cent of fixed capital than pioneers can, because the circulation is more rapid. For the same reason the raising of staple annual crops gives place to

double cropping, dairying and full feeding as land grows more valuable, frequent returns serving instead of large circulating capital.

In general, the wealth of a community is better judged by its fixed capital, while its thrift is known from its circulating capital. Fixed capital is always secured by consumption of circulating capital. The extension of railroads always implies great reduction of ready supplies. Money *between* individuals and communities ranks as circulating capital, but *within* any community the stock of money needed for domestic trade may be thought of as a permanent machine. Even machinery may be circulating capital in the hands of one who manufactures or sells it, though fixed when located in its work, and for the whole community is "fixed" as soon as its destined use is determined by its form. Thus the distinction, though real, is flexible. Its importance in discussing the industries of a country, or in understanding the relations of various industries to each other and to the world, will appear later in the book.

Capital unproductive.— Capital is sometimes said to be *unproductive* in contrast with *productive*, although the very nature of capital requires productiveness. The occasion for this distinction is in the fact that means devoted to future production of wealth in a particular way may be years in returning the product; the destination is evident and the return confidently expected, yet the owner is without income or near prospect of income. Such ventures are seen in the reclaiming of waste lands by drainage, the equipment of extensive mines, and the construction of dykes and levees. Land held for sale

or use in the indefinite future is a most common illustration of unproductive capital.

If wealth in some readily exchangeable form is intended for productive use, but is held for a satisfactory opportunity, it is sometimes called free or *floating capital*. It may be available for any temporary use, and so afloat among a variety of investments. Some great enterprises, like the building of the Suez canal, are begun in view of attracting floating capital. Borrowers generally look to such accumulations for their supply of funds.

Capital in farming.—A clear view of the uses of capital may be gained from estimating the needs of a young farmer just starting out for himself. For all his equipments he must depend upon the time and effort of somebody embodied in form of tools, material and sustenance, for capital in any form is simply this. A farm of 160 acres improved, or already out of the crude pioneer stage, represents about ten years of one man's time, say $3,000. A house suitably furnished for himself and his young wife means three years of time, $1,000. His barns and corrals and intersecting fences cost two years of time, $600. His team and stock and the necessary tools make nearly three years of time again, $900. Seed, feed, provisions, clothing, insurance and wages for help, all to be used before his first year's crop is sold, require at least $500 worth of time, or nearly two years more. The needed capital for such a farm thus represents full eighteen years of the time of an able-bodied man, or $6,000. If we add to this the cost of bringing to mature age and intelligence the three

able and efficient workers needed to manage and work that farm, we shall credit the past, without counting the time and energy of the young people themselves in growing and learning and gaining their skill, with thirty years of labor, $10,000, put into the farm and its occupants as they stand ready for a year's work. This accumulation is likely to show all the forms of capital described.

Capital conservative.—Capital, especially in fixed forms, being in its nature the conserving of energy, is necessarily an incentive to conservatism in society, since any great and sudden changes in the habits of a community involve rapid consumption or destruction of capital. Capital is said to be "timid." This statement means simply that all owners and users of capital who realize the time required for accumulating it hesitate to risk its destruction in doubtful enterprises, uncertain confidence or venturesome experiments in goverment or financiering. War, riots, or even revenue laws, may destroy fixed capital that has been the growth of a century. A small change in tariff laws has rendered useless immense factories. For the same reason farmers, having so large a fixed capital in farms and farm machinery, do not take kindly to political changes involving doubtful consequences. States where the capital is still circulating may readily venture upon experiments financial or political, since little time is lost even in destructive results. People in new countries take risks readily because they have less to risk.

CHAPTER V

PERSONAL ATTAINMENTS

Accumulated energies.—The force accumulated through personal effort in training, education and discipline is similar to capital in the fact that it represents a period of time between the effort and its full accomplishment, and that it is devoted to production of wealth. It differs from capital in being immaterial human energy, exceedingly useful in combination with capital, but a part of the laborer, not his tools. It is gained by devoting time, attention, thought and practice to acquiring methods of greatest efficiency in any act of labor. It requires surplus energy in labor at any task to gain, not only the material result, but power to do the same task better and more easily next time. All the time expended in acquiring such powers is put into the value of what is finally produced. Any peculiar tact or ability developed becomes an essential part of individual powers, and its product, like that of any form of exertion, becomes the property of the individual.

In this way, not only is the cost of gaining skill or education, or of establishing habits, returned in the product, but often a considerable increment, or gain, from the larger demand for such abilities. A

skilled artisan's labor meets more urgent demands for its use.

Skill.— If this extra exertion takes the form of training muscles, nerves and brain to act with speed and accuracy as judgment directs, we call the attainment *skill.* Even if the action required is simple, dexterity comes only by practice, and in special cases may multiply the product many times. Two men may shear sheep with equal accuracy, but one has three times the speed of the other. His skill secures employment at three times the wages of the other, with profit to the employer, because the extra speed saves room, attendance and risk over employing three men at one-third the rate. The shearer profits by the rarity of his skill in getting the wages of three men, with the support of but one, and in more constant employment. When the operation is more complex, and success involves larger interests, skill counts indefinitely more, and as society grows complex the room for exercise of skill becomes larger and more varied. The wide difference between pioneer farming and market-gardening illustrates this. The history of agriculture shows the slow development of skill in the furrow, the ditch and hedge, and in the handling and breeding of stock. Farmers once barely scratched an acre a day with their rude plow and were long in learning the use of a harrow. No attempt, according to Professor Rogers, to improve the breeds of cattle and sheep appeared before the eighteenth century in England. Most early improvements in farming skill came from the industrious monks, whose intelligence fostered skill.

The advantage given by skill perpetuates skill from generation to generation through aptitude and superior training, and so the people of a neighborhood or a country may inherit such power in contrast with other regions. "Yankee ingenuity" has become proverbial through such natural extension.

Discipline. — Education serves the same purpose by acquisition of knowledge in such ways as to give wisdom in its application. It involves an exercise of intelligence to the establishing of sound judgment. Broader than skill in its range, it increases the possibilities of skill as storage of power. The skill of the surgeon would never have existed but for the brightening of his intelligence by education. The electrician's training depends upon a broad foundation of education in knowledge of the matters he handles so dextrously. In farming, this source of stored up power has until very recently been ignored. While men in many professions were multiplying their individual power by spending youth in school, the farm boy would be simply trained at the plow, without the enlargement of practice in thinking required elsewhere. Such education has become at length, like skill, a requisite of each generation in order that our civilization may be maintained. For this the states build and the nation sustains agricultural colleges.

Character. — Just as important, though often overlooked in enumerating economic forces, is the acquired personal habit of self-control. Without it both skill and education avail but little, and it may do its work independently of both. "Tried and trusted" expresses

our estimate of the importance of long practice of virtue in meeting obstacles. The formation of habits — personal, business and moral,— is a matter of time and discipline. It costs exertion through a series of years; but the power accumulated may be needed only once, in some great emergency.

The character of the workman, the tradesman and the farmer enters more or less into the product of his toil and gives it value. Though I may not care from whence come the shoes I wear, or the butter I eat, I do care for the genuineness of both, for which I must depend upon the genuine character of the makers and sellers of both. This, too, is maintained from generation to generation by its successful use in acquiring both power and wealth. It cannot be had without the expenditure of time, energy and means of the fathers and mothers of one age upon their successors.

Importance of attainments. — All these personal attainments, whether confined to individuals or extended over whole communities, must be reckoned among producing powers and reckoned with in estimate of earnings. A community deficient in either is low in ability to supply its own wants or the world's wants, and no amount of material capital can take their place. They are superior to capital in being less destructible by fire or flood, and more easily turned to account in new enterprises as needed. No capital is perpetual, even in most fixed forms, nor is any personal attainment sure to remain of direct use; but the latter has a larger expectation of usefulness and greater permanence in the economy of nations.

CHAPTER VI

COMBINATION OF FORCES FOR INDIVIDUAL EFFICIENCY

Ideal manliness.—Every community has highest efficiency and best civilization when each individual member has the largest range of abilities to meet wants, and the largest range of wants to be met. An ideal civilization involves the distinct aim of gaining for each mature person in any association the fullest development of all abilities and all materials and tools for their use. This is amply illustrated in a family of well grown, well trained, well educated, trustworthy men and women with sufficient capital under control to maintain the highest activity of every personal power and attainment. Childhood and old age must always be provided for by exertions of those whose abilities are in their prime, and accidental weakness of every kind is met from the same strength.

Any mature person is best equipped for productive industry when, sound in both body and mind, he has the accumulated energy of the past for his use in the shape of capital and hereditary traits, together with skill, education and established character. Such a man is recognized at once to have his place among "the heirs of all the ages in the foremost files of time." Any

people claiming leadership among nations must depend upon its representatives of such a fully equipped body of men for that leadership.

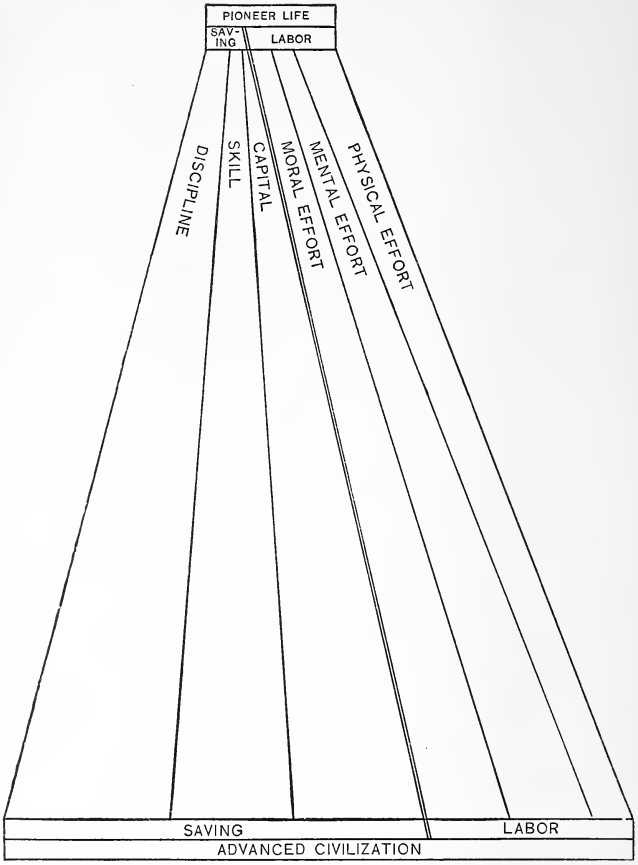
From savage to enlightened.— The increasing importance of such full manliness, as society becomes more complex in both wants and efforts, is easily seen. In ruder life muscular energy and endurance, with some slight ingenuity, are sufficient to meet the ruder needs, with some chance of saving for future wants of a growing family, which will continue the same round of muscular contest with savage conditions.

The American Indians have given the fairest exhibition of the kind of welfare which such exertion and accumulation afford. The weak disappear quickly, because the strong have too little surplus of energy to care for them. Among those left, both burdens and means of satisfaction are quite equally distributed, because of essentially equal powers of exertion. But in older and more civilized communities large portions of the people are dependent upon the rest for knowledge, ingenuity and skill to keep the very much larger supply of material needed for maintaining the civilization. At this stage of progress a man with only muscular development finds himself entirely dependent upon some one else for the plans by which all must live. A savage cannot share equally with the wise man either in the burden of caring for the community or in the welfare which the community enjoys.

It is easy to see that the relative importance of accumulated wealth in the shape of capital or of skill or of the character which results from generations of training,

becomes more and more distinct as the community becomes more developed. Any man, then, who is lacking capital, skill and morals, or all three, is in some respects like the savage, and will find his equals among the savages. For this reason a pioneer country affords opportunity for a youth without skill or personal attainments of any kind "to grow up with the country;" and the famous advice, "Go west, young man, go west," applies strictly to such a youth, and with less and less directness in proportion as the young man has control of himself and of accumulated wealth.

A simple diagram (Chart III) may illustrate the progress of civilization from the general poverty and inefficiency of rude pioneer life to the power of a thoroughly organized and developed community. The poor man, in the sense of one whose abilities are undeveloped and who has no visible means of support, is relatively less able to care for himself in the enlightened community than in the ruder pioneer life. In this sense, and this alone, the poor man grows poorer with advancing civilization. This may easily be seen by comparing a thrifty farming community of today and all the accumulated stock, machinery and tools of the farms, with the same community sixty years earlier, when all was practically wilderness. A strong man with an ax and a hoe could enter the wilderness anywhere and live nearly as well as any of his neighbors. Such a man in the higher country life of our times must work for some one else at wages, or must be supported at public expense. In either case he feels his poverty. At the same time, the extreme of suffering is less likely



III. Illustrating the relative importance of labor and saving, in the progress of civilization from its beginnings in pioneer life.

to be reached in the richer community. The poorest man has comforts of which the pioneers never dreamed. Even a tramp can live on the fat of the land, but not by his own exertions. The failure of a crop in the pioneer country means starvation for a large portion of the few inhabitants. A failure in the older community means suffering for a few in diminished food and clothing, but all live on the accumulations of the past.

Developing civilization.—This essential advantage of accumulating power in individuals, as civilization advances, is necessarily connected with the very nature of civilization and growth. As no conceivable device can make a babe as efficient as a man, so no contrivance, political or social, can make an undeveloped man equal to a fully developed one.

The intense community of interests in high civilization makes even more important the individual abilities of each sharer in those interests. For this reason every device for universal education, development of skill and strengthening of character, and every check upon deterioration of personal strength or wisdom or virtue is to be considered. Any neglect of the individual in his development of personal attainments retards the development of the community. Any device for the equal distribution of wealth which does not increase individual thrift in the use of wealth at least retards the growth of the community, and may very quickly reduce the power of the community as a whole until it reaches the inefficiency of savage life.

All true charity, even equity, requires that the object of distribution of wealth shall be the greater efficiency

of each individual. If there shall ever be a community of individuals gaining equal enjoyment, it will be made up of those possessing essential equality in personal powers and attainments, and in accumulated capital as well.

CHAPTER VII

METHODS OF ASSOCIATION

Simple association. — While the absolute equality of individuals referred to in the preceding chapter is practically impossible, the community of interests as civilization advances becomes much closer through various plans of association of individuals in common work. Indeed, the community is a community because a multitude of individuals work together. The simplest form of association is seen where men work in gangs, all acting alike, as in lifting a log or a rock, hoeing the field, or in building an embankment by shoveling. Among farmers the habit of exchanging work, so common in pioneer settlements, illustrates the advantage of combination. This may be called simple association, by which many hands make light work.

Complex association. — A more complex association is found in even the rudest settlement when one man undertakes a particular kind of labor for all his neighbors, they in turn doing a different kind of work for him. A farmer in a new settlement found the children of himself and neighbors without a school, and agreed for several winters to teach a school as many days as his neighbors would chop in his clearing. This association cleared the land and supplied the school. Such

exchanges of labor develop rapidly in every growing community and form the basis of a most extensive commerce. When "Adam delved and Eve span" the family was far better provided for than if both had undertaken to delve and spin. The fair exchange of products makes each man's product more useful to both himself and his neighborhood. Such association is less noticeable in a community of farmers, where all are seeking essentially the same products, than in almost any other community. Yet the presence of the blacksmith, the shoemaker, the wagonmaker and the tailor contribute very largely to the comfort of all concerned.

One chief disadvantage of farms remote from villages is the want of ready exchange, or association by different employments. The part which such exchange plays in the accumulation and distribution of the wealth of the world is so great that several chapters will be needed to present its importance. The study of exchanges is sometimes thought to cover the whole question of wealth. It is often treated as separate from production. But its advantages and disadvantages are most easily seen by considering all its bearings upon the increased product of a multitude of workers.

Compound association. — A still closer association, sometimes called compound association, is found where several workers combine efforts of different kinds in a single finished product. It is easily illustrated in an ordinary dairy, where one of the family drives up the cows, another does the milking, another sets the milk and cares for the purity of all utensils, another perhaps skims the milk and churns the butter, and still another

works and packs it. All this labor of many hands has its importance represented in the butter packed for use. The particular advantages of this division of labor will be treated in a future chapter.

Aggregation of forces. — A still further advance in association appears when many laborers in many ways, with multitudes of tools and machinery, are combined in a huge establishment in such a way as to employ all efficiently. This is illustrated in the so-called bonanza farms of the west, but more distinctly appears in the great manufactories, or in any extensive coöperation or great enterprise. A study of these will also require a future chapter.

While all these methods of association blend with and into each other in every kind of community, a careful analysis of each is necessary to a full understanding of their relation to welfare. For this reason it is best to analyze and illustrate each by itself. The succeeding chapters will take up all the intricacies of exchange before presenting the special advantages and disadvantages of technical division of labor and of great corporations.

CHAPTER VIII

EXCHANGE: ADVANTAGES, LIMITATIONS AND TENDENCIES

Exchange in production.—The immense importance of exchange in promoting the welfare of communities is easily granted, and is illustrated in every village store or even in every simple farming community. Today the market for farm products is easily felt to be the most important consideration, and weighs in every farmer's mind when buying or selling his farm. When a state like Kansas raises from six to ten times as much wheat as its people can use, exchange is evidently an essential factor in every farmer's welfare.

The multitude of everyday wants in most households supplied only through commerce shows the extent and importance of this exchange of labor throughout the world. The great advantages, however, may be seen by a little more careful analysis of the growth of individual powers under a ready system of exchange. Every laborer becomes effective by experience in some particular industry. A thousand years will not perfect a single worker in any of the thousands of employments needed to supply his wants. Every farmer knows the weakness of a beginner in farming, coming from any other business; and without exchange, every workman must always

be a beginner in everything. Exchange is one of the chief motives to accumulation, since others' wants as well as our own are kept in view. The "hand to mouth" liver is almost always a man of all work, thinking little of exchange. It is especially a stimulant to saving, since it makes capital itself more useful and brings it directly into competition with all other forces. Products stored in the granary have their significance because of exchange.

Still more important is the cultivation of special abilities, impossible without exchange. The indefinitely varied powers of human nature are made most useful where each can devote his talent to a definite business; and usually the talent best fitted to a business is attracted toward it. Habits, too, which are the chief labor-saving characteristics in human nature, become all-important, and enable an individual to do a large part of his work with the least possible care. The routine of everyday life is followed with little effort or pain. The more regular the routine the easier it is to follow.

A still greater advantage to communities is found in the enlargement of the range of wants in all individuals. The superiority of enlightened men over savages is largely due to their greatly increased needs, since necessity, the mother of invention, compels exertion and finds the way to satisfaction. It seems, however, that exchange contributes most extensively to welfare by combining individuals into a community, and smaller communities into a larger, until the whole world is brought into sympathy. Thus every human being

gains the advantage of growth in mind and character through some contact with every other human being within the commercial world. If ever a reign of peace and plenty shall extend over the world, no one doubts the importance of commerce and intimate exchange in bringing that time. The full advantage of free exchange in promoting human welfare cannot be over-estimated.

Exchange limited by powers.—With all its advantages, there are certain obstacles in the way of its extension, always more or less effective in limiting its range. A community can have few exchanges among individuals if all are busied in the same or similar trades. A farming community has little need of buying and selling among the farmers. A horse trade or an exchange of one brute for another may supply all necessities. In larger communities similar limitations are found where abilities are similar, or where habits in education, government or religion are very uniform. In such cases opportunities for exchange are limited, and commerce itself grows slowly.

The story of pioneer settlements is uniformly one of slow and uncertain commerce for want of the variety in wants and abilities which makes the very foundation of exchange. Sometimes "day's work for day's work" is the limit of exchange throughout a whole region or country. In the world at large limitations often arise from hostile feelings between nations, and as yet the highest freedom of exchange between people under different governments has seldom been reached. The United States affords the brightest example of people

with varied characteristics developed through the stimulating effect of ready exchange.

Commerce over-estimated.— So rapid has been the advancement of systems of exchange within the last half century that men are prone to over-estimate the importance of commerce and its interests. The amount of wealth in motion exaggerates the importance of wealth itself, so that multitudes overlook the foundation in productive industry, and become mere bettors upon the market, attempting to catch a part of the moving wealth as it passes. Any speculation in mere commercial transactions may become a very serious obstacle to legitimate industry by its effect upon both the industry itself and the incentives to industry among the people. This danger is increased by the greatly extended interest in exchange among the rural population.

Scarcely a farmer in our country is beyond the effect of any extensive commerce throughout the world. The crops of South America and of the Russian plains are now as important to a farmer of Dakota as his own, since all must find a common market in the manufacturing countries of Europe. Speculation on the Chicago Board of Trade is likely to be as interesting to a farmer in Nebraska as to members of the Board. He is even tempted to try his hand at speculation, either directly through a commission house or indirectly through the marketing of his grain. In either case he is caught by the dangerous motion of modern commerce. The chief remedy for these tendencies must be found in a wider acquaintance with the facts of commercial life and a clearer perception of what is genuine commerce.

Every farmer needs to distinguish, and distinguish carefully, the actual, necessary machinery of trade and the principles underlying it, that he may appreciate the genuine and oppose the false. On this account several chapters are given to questions of exchange, with an effort to bring into more prominent light the ways in which all commerce affects the farmer's life.

CHAPTER IX

VALUE THE BASIS OF EXCHANGE

The nature of value.—Perhaps no question in the discussion of wealth is of greater importance than the nature of value. Certainly the measurement of value in all our property is the basis of all exchanges, of all book accounts, and of all inventories. The worth of any piece of property in such estimates always involves some comparison, either of things possessed or of exertion required or of satisfaction yielded. In comparing an apple and a peach, both equally attainable, we may value the peach most highly because it gratifies desires in higher degree. Thinking of future uses, we may value the apple more highly because it will keep longer, and so be available for future wants. In considering all the kinds of satisfaction to be provided for, we may think of the peach as desired by more people who are likely to render us service, and therefore more readily exchangeable, and so of higher value. Again, the peach may be at the top of the tree and the apple within reach, in which case we may think whether the peach will give enough greater satisfaction to make it worth the greater exertion to get it. In this way a single individual, who has wants to be gratified only by exertion, forms an idea of value as founded upon some relation between his

wants and his powers, between the desires to be gratified and the qualities of the object expected to give satisfaction.

Since wealth always implies an accumulated store of good things, every one comes to think of the worth of his accumulation as estimated by what it will do at any time, in any place, in satisfying any need. So, most naturally, we associate our ideas of value with trade. An exchange of horses brings in not only the present qualities of each horse for present service, but all the qualities and circumstances affecting the possibilities of disposing of the horse whenever something else is needed more. An expert judge of horses not only knows when the horse is sound in wind and limb, and what are the signs of docility, speed, etc., but also what the rest of the world considers the qualities of a satisfactory horse. In all experience peculiar circumstances, varying the relation between wants and satisfaction, affect immensely our estimate of value. When an ancient king shouted, "My kingdom for a horse!" he was doubtless moved by the uselessness of a kingdom to one about to lose his life in battle for want of a horse and also by the difficulty at that particular moment of gaining a horse.

In ordinary experience everybody estimates value by some comparison with what he can obtain in exchange. A picture of a friend may be priceless in two senses: first, of so great importance to its owner that nothing can buy it; second, of so little importance to anybody else that nobody will give anything for it. In any inventory of wealth the picture could not be counted;

it is valueless. But in any judgment of personal welfare it may be beyond price. So, in the universal experience, the term value has come to be used as essentially connected with exchanges and with property as stored to meet all kinds of wants.

Value in services.—In a similar way experience has developed the idea of value with reference to services. A service may be invaluable, as when a physician saves the life of his patient, but the value of that service is estimated by the return expected in the community where the physician and his patient live. Many services of highest usefulness and most important in welfare cannot be valued in terms of wealth, because no wealth can secure them. Love and patriotism and philanthropy cannot be had for wealth. But in comparison of two services rendered for hire, both are measured by their general utility, either directly or indirectly, and even this estimate is modified by the readiness with which either service can be secured. One who seeks the service of an artist who stands alone among ten thousand people, may be willing to give the services of a thousand other men, which can be had for a trifle, because they are everywhere abounding.

Essentials of value.—Experience seems, therefore, to settle upon three conditions for value in any article of wealth or any service rendered. First, the article or service must have utility—that is, it must be useful in satisfying somebody's wants, either present or future. Second, those wants must be of such a nature that effort on the part of some human being will be necessary to gratify them. Nothing which can be had at all

times by mere desire of it can have value. Third, the object must be of such a nature as to command other services or exchange of other wealth. For this reason it must be transferable from one owner to another.

Utility as related to value. — While utility is a basis of all values, it is not the chief element in measuring the value of wealth. The things of highest utility, like air and water, have no value as long as trifling exertion will bring them. Even land is without appreciable value so long as any person can obtain it by settling upon it.

In general, we measure utility by the relation between the nature of any object and human nature as expressed in wants. A bushel of wheat has utility equal to the number of loaves of bread it will furnish to hungry humanity. In this respect every bushel may have the same utility as every other. This would be true if every bushel of wheat was wanted by hungry people able to exert themselves in securing it; but if five bushels of wheat are sufficient for each human being in a year's supply of bread, a distribution to all the world of more than five bushels to each would make some of the wheat useless. So if the world's product of wheat more than supplies the world's want, the extra amount will be without utility unless some means of storing against future want is devised. In that case the utility of the stored portion will be lessened by the extra exertion required to store it until the need comes. One may be glad to pay twenty-five cents for a good dinner, but an equally good dinner offered immediately afterwards will have no utility, unless he can save it for

supper. If the dinners offered are so many as to imply that several will be useless, the value of each is likely to be affected by this estimate of lost utility in some. Dinners in that case are liable to be furnished for what they are worth for cold suppers.

If any article of commerce, like wheat, has its highest utility in one way of meeting wants, as in bread, that utility will have a strong influence upon value as long as the supply of wheat is not too great for this want. If the supply of wheat should be so great that only a small portion could be used for bread, other utilities would be sought. It would be used for feeding hens, and perhaps for cattle feed. If still the amount is too great to be consumed, it might be used for starch. In this case the least useful portion is likely to furnish the estimate of value for the whole. Both the raiser of wheat and the user will consider the lowest use as the probable basis for sale.

Before the opening of the Erie canal a farmer in northern Ohio drew a load of wheat twelve miles in hope of a market. The dealer said: "It isn't worth anything, since nobody has any use for it. If you had a load of sand, I could pay you for that, to fill the mud-hole in front of my store." Since the utility of some wheat was nothing, the value of all wheat tended to nothing. On the other hand, if wheat is scarce in the community, it will be used only to meet the wants of the delicate or the fastidious, whose comfort and life may depend upon it. In that case its general value will be estimated by its higher utility, whatever other use it is put to. That is called a final utility, which, in

any particular case, is the lowest use implied in consuming the supply. And this final utility is the only one influencing the estimate of value.

It is possible, therefore, that the total utility of anything, like a paper of tacks, for instance, may be greatly increased, since it has indefinitely more uses than when tacks were first made. Yet the supply of tacks is so enormous that to consume them we must use them for trifling purposes; and therefore their value is a trifle. When we have water to throw away, its value is nothing. When water is limited to culinary uses, its value is considerable. When water is sufficient only to slake extreme thirst, its value is beyond price. Even the prospect of a future supply diminishes the utility of any commodity, since time is an important element in satisfaction. Thus a store of potatoes in early spring, however well preserved, has its final utility lowered, and therefore its value lessened, by the prospect of new potatoes.

On the other hand, the present value of a field of grain or the young orchard is dependent upon its utility in meeting a future want. Everything which enhances prospective utility of any article enhances its value; and everything which diminishes the chance of such utility, like bad weather, insects or plant diseases, diminishes the present value. In this way risk diminishes the value of wealth subject to it and increases the value of wealth which has passed by it.

In general, the usefulness of anything is no criterion for measuring value, because other elements of value are more important. Henry C. Carey says, "Utility is

the measure of man's power over nature; value is the measure of nature's power over man." This may be a striking way of saying that great utility implies a discovery of uses, while great value often indicates only difficulty in securing what has great usefulness.

Exertion as related to value.—Since utility, however essential to value, is not its measure, we are led to consider whether the exertion required to obtain any article desired may not measure its worth. This is certainly a matter of prime consideration, and many have been led to suppose the cost of production, by which is meant all the exertion necessary to bring any commodity to its final consumer, to be the sole and absolute measure of value.

This supposition, if ever correct, is subject to great modifications. None know better than farmers that a bushel of wheat from one field may have cost twice as much as a bushel from another field, without any possible distinction in value. Every mechanic knows that what he has accomplished with great exertion may have been duplicated by some labor-saving device with half the exertion, the two values being essentially equal. Nothing is more common than to find articles in the market sold without regard to cost because they are superseded by more desirable articles. Indeed, the most ardent defender of cost as the sole basis of value is obliged to notice multitudes of exceptions to the rule. Yet it must be granted that only those articles involving effort in securing them have value at all, and in general the amount of effort actually put forth has some relation to our estimate of value.

In general, men do not exert themselves more than

necessary to meet wants, and in any exchange with others estimate the value of what they have produced by the exertion expended. Yet, as products of the same kind exchange in the same market without regard to their individual cost, it is evident that some other principle must be discovered. Nevertheless, no farmer will continue indefinitely the raising of a crop which brings in the market less than a fair average return for his labor in raising it. In a series of years he expects his wheat to return a fair compensation for labor expended. In the same way every manufacturer expects a full return for all cost of all his efforts, and would not continue his work from year to year without such expectation. Moreover, when for any reason the market value of anything is much above its cost, somebody is ready to increase the supply of that particular article, and more will add their efforts in the same direction until its value approaches nearly the general cost of production as compared with the cost of other products selling in the same market.

Normal value.—In this way the cost of production is said to fix the normal value of any article of commerce capable of production in indefinite quantity and within limited time. For this reason farmers are interested in finding the average cost of production of wheat, corn, etc., within a region supplying their market. They are even interested in knowing the conditions for wheat raising in India, South Africa and Australia, since the cost of production there may influence the value of wheat throughout the world. The normal value of products capable of indefinite multiplication tends always

toward the value of the least costly. This is shown in the effect of labor-saving machinery upon the value of cloths and other goods. It is equally true in agriculture that wheat raising upon cheap land with extensive use of machinery and economical methods of culture and harvesting brings down the normal value. So long as more land can be applied to wheat raising with these advantages, the less productive methods may be too costly for the market.

On the other hand, if any production cannot be largely extended so that the supply in market barely meets the requirements of purchasers, the tendency of normal values is toward the cost of the most costly part of the product required to meet wants. This is because the supply is kept up only by the exertion of the greater amount of labor as well as the less. If farmers in western prairie country can raise corn at an expense of 15 cents per bushel, as they can upon an average, so long as that region can raise all the corn required no less productive region can force the normal price above what will keep western farmers raising corn. When the western crop fails, the price is far above normal value, and may even go above the cost of the most costly corn in market, under a principle called the law of supply and demand.

Since improvements in method so constantly lessen the normal value of products, Mr. Carey made the effort to measure value by "cost of reproduction," meaning, I suppose, that any article produced at any time and place is likely to bring in any market a price equal to the cost of similar articles produced under the most improved

methods anywhere used in the present. This, of course, does not apply to articles not desired in the present, because deteriorated or out of fashion or less useful than some new device for a similar use, but only to those articles of full utility in having all the qualities needed to meet the desire of purchasers. Even a diamond like the famous "Kohinoor" would have its almost priceless value reduced to the cost of securing similar jewels equally desirable if a process of crystallizing carbon were suddenly discovered. It is easy to see, then, that cost measures value only so far as it is directly connected with the available supply in any market. Under ordinary circumstances the supply cannot be increased unless the cost is met, but the rule is modified by any peculiarity of season, or conditions of trade, or production by cheaper methods or cheaper labor, or by the changing wants of a community. The application of all these influences may be studied under the so-called law of supply and demand.

Supply and demand; markets.— The law of supply and demand is only a statement of the general fact that market value tends to increase with increase of demand and to decrease as the supply to meet the demand increases. It must be understood that a market means a particular spot where buyers and sellers of any article of commerce meet at a particular time. The supply is the amount offered for sale at a given price. The demand is the amount buyers will purchase at the same price.

Thus, if on a certain day sellers offer in Chicago 10,000 hogs, with a willingness to take $5 per cwt., they

represent the supply. If on the same day in the same place buyers are willing to take 10,000 hogs at $5 per cwt., $5 will be the market price, and the supply and demand will be equal. If, however, only 5,000 hogs would be bought at $5 per cwt., 5,000 hogs will be without buyers, and their owners will seek, by lowering the price, to find buyers at $4.50 per cwt., if necessary. Since all the sellers will feel the same pressure, the tendency of market value will immediately be downward. Buyers willing to pay $5 per cwt., finding many sellers, will expect a reduction in price, and the price will certainly go down until the hogs purchased equal the entire supply. And that will not be until the buyers are stimulated by reduction of price, so that as many hogs are wanted as there are for sale. If that point is reached at a price of $4.50 per cwt., the market value is found there. The limit of time within which this reduction takes place will depend upon the ability and willingness of sellers to wait. If the product offered is perishable, or costly in keeping on the market, the reduction will be speedy. Otherwise it may be held indefinitely with the hope of compelling buyers to come to the higher prices, in which case it is practically taken out of the market. Only those commodities are practically in the market which are held for sale at the market price. Only those buyers practically enter the market who are able and willing to give the market price.

The higgling of the market.—The process of reaching an agreement between buyers and sellers is called the higgling of the market, and represents the conflict be-

tween the wishes of sellers to get the most possible for their products, and the wishes of buyers to get the most possible for their money. In fact, both buyers and sellers have the same motive: to make their own exertions go as far as possible in supplying their own wants. The fact that money enters into the transaction makes no difference with the bargain. Two farmers trading horses have exactly the same desire: to get the full worth of the horse to be given. A genuine bargain usually benefits both parties. Even in a horse trade each owner expects to be benefited by the exchange; and only a jockey seeks that benefit in taking advantage of his neighbor's ignorance or inexperience.

So, in the general market, every seller gains what he desires more than what he possesses, and every buyer has exactly the same experience. Two friends may exchange books if either would be benefited by the exchange. In that case the one gaining the less valuable book gains the satisfaction of giving to his friend. Both are still profited, one by the larger value received, and the other by the pleasure of giving. In such an exchange no basis of value is reached, but in any ordinary bargain the final adjustment will be as nearly as possibly upon the test of value in the market. Between one buyer and one seller, the bargain is likely to turn to the advantage of the one who is quickest to discover the weakness of the other. If two persons are discussing the price of a house for which the seller wishes $1,000, but will sell for even $600, and for which the buyer hopes to give only $600, but will pay even $1,000, the seller will gradually lower his price, and the buyer

gradually raise his offer until one or the other discovers the working of his neighbor's mind. These are the natural conditions for sharp bargaining

In the larger market the interests of a multitude of buyers and a multitude of sellers have weight, and no shrewdness can prevent a settlement upon such a price as comes nearest to satisfying all parties. The so-called law of supply and demand is a brief statement of the fact that sales cannot be made in open market above the mark where buyers and sellers agree, and that mark is essentially the price at which all who are willing to buy at the price current are met by those who are willing to sell at the same current price. With reference, then, to all articles sold in open market, it is safe to say that the only test of value is the price which the public is willing to pay. So universal is the acceptance of this principle in practical affairs that everybody estimates the value of his property by the price at which it will sell. Any appraiser or assessor who should adopt a different principle would be considered wholly untrustworthy.

Freedom in markets.—In this higgling of the market it is absolutely necessary that buyers and sellers have essential freedom of choice and fairly equal information. There may be conditions of law preventing free competition, as under the regulation of prices attempted in various countries prior to the present century. In England, during nearly four centuries, limits of prices for nearly every article of food and clothing were named by law. Yet in every instance the conditions of the market were stronger than the laws, and the restriction upon free competition and free discussion of prices actually

destroyed the open market. The conditions of a bankrupt sale at auction reduce the competition to a struggle between buyers. In this case a very slight collusion between the buyers may destroy the market. This is frequently illustrated in the sale of real estate after foreclosure of mortgages. The unnatural conditions of auction at any price are so evident as to make common the secret employment of sham bidders, shrewd enough to push actual buyers as far as they will go without preventing the sale. Somewhat similar conditions may exist in a great cattle market, in which immense quantities of cattle are delivered by owners, while the number of buyers is few. The great packing houses have the advantage of being almost the sole bidders for what must be sold at their price. These conditions, however, are not made by the packing houses, but by the large supply subject to immediate sale. Such conditions are much more noticeable in the market for ripe berries, when a slight excess of supply makes these perishable products of trifling value.

Conditions on the other extreme, from scarcity of supply and anxiety of buyers, may also interfere with a free market. Any scarcity in food products leads to an anxiety on the part of consumers to buy and an equal disposition on the part of owners to hold for higher prices. In this case, while the law of supply and demand is still active, the effects are quite out of the ordinary course. Thus, for a long time it has been estimated that a scarcity of one-tenth in the natural supply of wheat raises the price three-tenths, scarcity of two-tenths raises the price eight-tenths, scarcity of three-

tenths raises the price one and six-tenths, scarcity of four-tenths raises the price two and eight-tenths, and scarcity of one-half makes the price of the half-crop four and a half times greater. A decrease in the supply of less essential foods evidently cannot have equal effect. Thus, a scarcity of sugar, causing increased price, will directly reduce consumption of sugar, so that the limit may be easily reached. The same conditions may exist with reference to meats, since a high price diminishes the demand from the disposition of people to eat less meat. Indeed it has passed into almost a proverb that dear bread makes cheap meat, for the reason that few will diminish the supply of daily bread, but the mass are willing to lessen the meat diet to save expense.

Similar conditions, affecting every market for any commodity, may easily be discovered. Yet in spite of all these extreme fluctuations, no better test of value has been suggested than the market price in open, unrestrained competition of buyers and sellers.

The market price. — In the discussion of value so far, the term market price has been used because perfectly familiar to everyone. It is necessary, however, to call attention to the fact that price always indicates an estimate of value in units of current money. If that money itself has a fluctuating value, the same article may have at different times different prices with the same value, or the same price with different values. Thus market prices in our country during and after the civil war, in which a paper currency gave the unit of prices, cannot safely be compared with each other, and can far less be compared with prices upon a specie basis.

Even the reduction to a so-called gold basis may give misleading ideas in regard to the market, since a new element of speculation in gold enters into the calculation. In all the accompanying illustrations of fluctuating prices, this particular abnormal condition has been carefully excluded. Any fluctuations in the value of money metals, necessarily affecting the relation of market price to market value, will be treated under standards of price in Chapter X.

Prices of farm products; the crop year.— The actual fluctuations of market prices under the law of supply and demand can be most clearly seen by a careful study in the same definite market during a period of years. For illustration here the staple products of the farm have been chosen, and the markets of Chicago and New York, as most truly representative, have furnished the facts for study. These facts are presented to the eye directly by a series of charts, each of which has been most carefully prepared from official records, and gives within narrow limits a large range of investigation. In every case involving annual crops, it seemed necessary to rearrange statistics so as to cover the actual year affected by the crop in question. September 1 was chosen as the beginning of each year, because that date is nearest the time when the new crop of the season appears in market and directly affects the price of such products in store. All calculations upon live stock have been brought to the same basis, for the reason that the supply of marketable stock is largely dependent upon the supply of feed for stock. It seems very desirable that all statistics in regard to markets and productive

industry should be brought to a uniform year. The year given in these charts seemed best to suit the subjects treated. It is possible, however, that for all data convenience would settle upon July 1, the beginning of the fiscal year in the United States, as the best for beginning the universal statistical year. Each chart in the series, of course, requires its particular explanation.

The fluctuations of supply and prices for series of years are exhibited in the Charts 4, 5, 6, 8, 9 and 12, and these are explained in detail at the close of the chapter.

Fluctuations with season. — Every product of the farm is known to have conditions favorable or unfavorable from the mere changes of season affecting the prospective supply. Conditions equally dependent upon the seasons have something to do with demand. The result of both combined is worthy of study by farmers and dealers in farm produce, that all may get the full benefit of such knowledge as the study affords. For this purpose, charts showing the annual fluctuations of staple products in the leading markets have been carefully prepared. These may have a greater usefulness than simply to illustrate the law of supply and demand, since it is within the possibility of actual practice to in some degree modify by provident foresight the extremes of fluctuation. It is hoped that the suggestiveness of these charts may help the most enterprising farmers to adjust their practice to conditions of market.

Charts Nos. 7, 10, 11 and 13 illustrate the fluctuations as related to seasons.

Law of diminishing returns.—In considering the value

of farm products, it is necessary to notice a natural tendency in all products of the earth toward greater cost of effort in production. This is called the law of diminishing returns, and is illustrated in every industry where the accumulations of nature are depended upon for making labor effective. Hunting, fishing and mining afford familiar illustrations of more work of the same kind for equal product.

Agriculture, however, gives the most extensive available illustration of the facts grouped under this law. In the first place, the farmer is subject to it by mere location. The product of a field near his house and barn costs less exertion than the product of a more distant field. In the second place, he is likely to have chosen for his first efforts in crop raising the land most readily yielding its fertility in crops. If he extends his operations to less productive soil, he must work more for the same product. In the third place, if a certain amount of work upon a certain field will give him twenty bushels of wheat, he must give a good deal more than twice as much work in the way of tillage and manufactured fertilizer to make a crop of forty bushels. The proof of this is clear in the disposition of farmers to buy more land instead of to increase labor upon a limited space possessed.

A specific statement of the law of diminishing returns is that *in the cultivation of land an increased amount of effort under usual conditions fails to give a correspondingly increased amount of produce.*

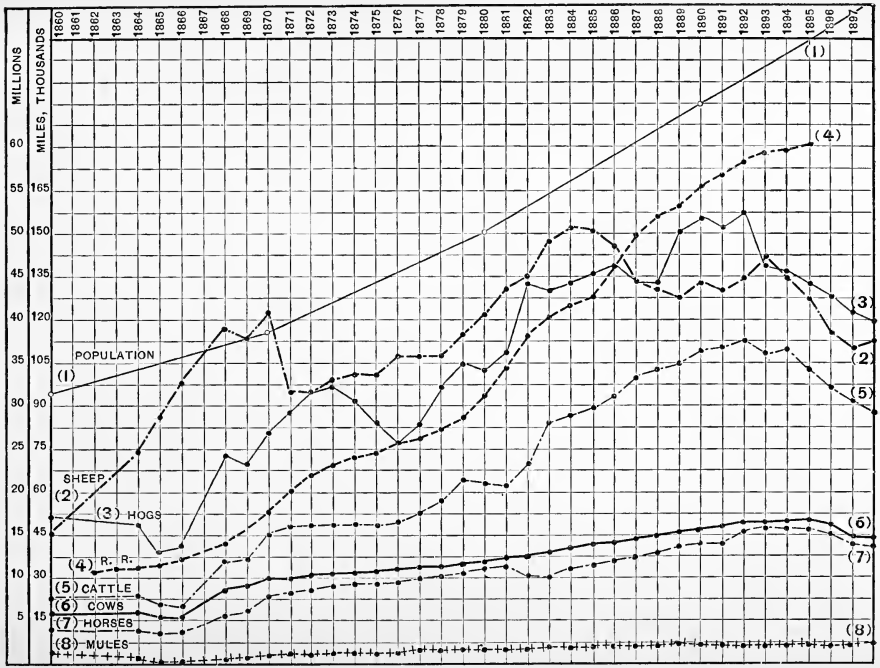
Exceptions to law of diminishing returns.—Exceptions to this law are easy to find, as where the first selection

of land in a new country has had reference rather to safety from wild beasts and savages or malarial diseases than actual store of fertility. Another exception is found in any new country, where imperfect adjustment of labor to conditions of soil and climate are liable at the outset to prevent the full use of natural powers of the soil. So evident are these two exceptions in imperfectly developed agriculture that some have disputed the general fact, yet all must admit the certainty of diminished returns from multiplication of the same kind of efforts upon the same space, and general proof is abundant in all long settled communities.

Effect of improved farming.—Counteracting this tendency to diminishing returns, and in many instances more than overcoming the difficulty, is a tendency toward improved methods in farming by more perfect application of labor to the soil, better developed crops, better adaptation of live stock to culture, improved machinery of every sort, and more extended range of operations in farming, reducing the restraints of space by improved transportation and more economical use of natural fertilizers; in short, by any improvement through which labor is made more directly effective in either quantity or quality of agricultural products. The whole story of the development of agriculture in all these ways furnishes abundant illustration of this counteracting tendency. In some regions it has more than counterbalanced the tendency to diminishing returns. Various staple products, like wheat, show in their diminishing value the advance in methods of culture and adjustment of labor to production.

Diminishing values.—The above is only a particular illustration of the general tendency of all values to diminish with every improvement in tools, machinery, economy of materials and saving of time, as the world gains wisdom in applying labor to the meeting of material wants. With every discovery of more perfect power or better use of natural forces, like electricity, or easier ways of handling raw materials, as in developing aluminum from crude clay, the value of the product quickly diminishes.

A familiar illustration is found in the manufacture of steel. The so-called Bessemer process, introduced some thirty years ago, reduced the actual labor of making steel from iron by more than one-half. Improved furnaces and greatly enlarged operations have reduced still further the labor involved, until now steel often takes the place of iron, and the value of all such products is greatly diminished. This is easily illustrated by comparison of prices during a series of years, as shown in chart No. 14. That this reduction in price is not the result of poorly paid labor, but of better returns for labor expended, is evident to any one investigating the tendency of wages or of living among wage-earners, or of the general improvement in welfare of communities where these labor-saving methods are applied. Any hardship connected with these diminished values falls chiefly upon the laborers who fail to adjust their work to the improved method. But even they gain for the diminished value of their product a larger return on the whole through exchanges than the higher values had brought them before.



IV. Comparison of the numbers of live stock with increase in population and mileage of railroad, 1860–1898. Page 84.

CHART NO. 4

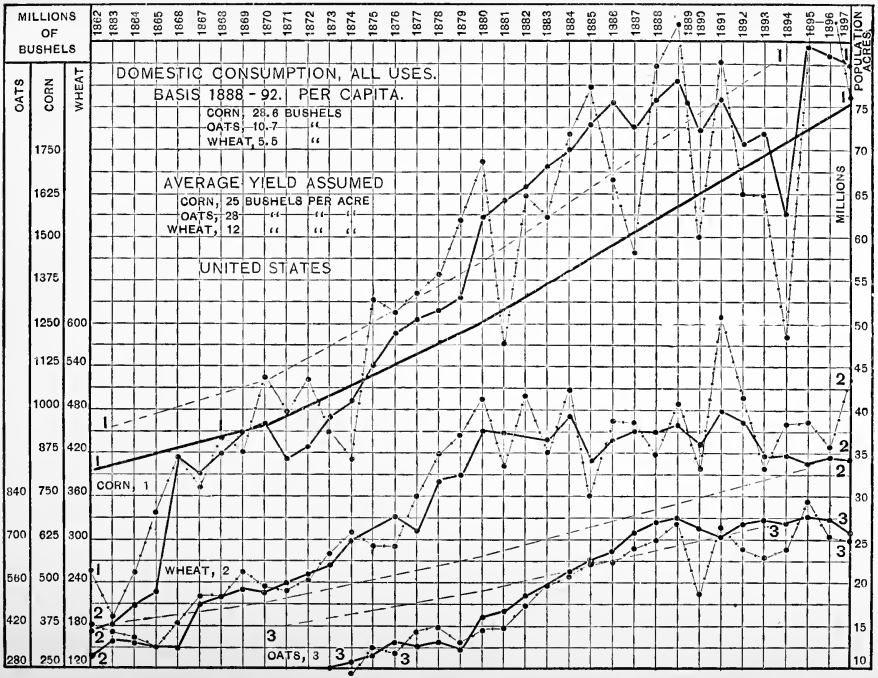
Numbers of live stock compared with increase of population and mileage of railroad, 1860 to 1898, in the United States

Explanation.—This chart exhibits to the eyes a comparative increase of (1) population, (2) sheep, (3) hogs, (4) railroad mileage, (5) beef cattle, (6) cows, (7) horses, (8) mules. The figures followed in making this chart are taken from the best estimates available, chiefly from the reports of the United States Department of Agriculture. It shows that railroad mileage has increased faster than the population, with some slight exceptions, and its fluctuations mark quite distinctly the periods of financial speculation and distress. The great fluctuations in the line of sheep raising may be seen to have some correspondence with special tariff legislation. The striking opposition of hog raising to sheep raising is in accord with the universal experience that farmers easily turn from one to the other. The rapid development immediately following the civil war represents the restocking of farms and the great expansion in farm industry so noticeable during that period. The falling off in numbers of live stock during the last five years is evidently a reaction from a very apparent over-production in many directions during the previous ten years. The miles of railroad are shown in thousands, the population and live stock in millions.

CHART NO 5

Acreage and yield of corn, wheat and oats, 1862 to 1897, in the United States

Description.—This chart is intended to show the fluctuations from year to year in acres devoted to the three staple crops, together with fluctuations in the corresponding years in yield of each. Figures on the right show the number of millions of acres. Figures on the left give millions of bushels. Continuous lines show the acreage. Dotted lines show the yield. For convenience of comparison, the line of increasing population is added. The



V. Showing the acreage and yield of Indian corn, wheat and oats in the United States, 1862–1897. Pages 84–87.

broken lines indicate what might have been the consumption of each of these staples within our own country, if the people had used throughout all the years as much of each as during the five years of plenty from 1888 to 1892. Lines marked 1 tell the story for corn; those marked 2 for wheat; and those marked 3 for oats. In comparing the number of acres as given on the right with the number of bushels as given on the left, it will be seen that an average yield of corn is assumed to be 25 bushels per acre; an average yield of wheat, 12 bushels; and an average yield of oats, 28 bushels. The variations of the dotted lines above or below the continuous line show whether the yield was greater or less than these averages. The average assumed is evidently too high for the oats.

Explanation.—Several important facts are shown. First, there has evidently been a very great increase in the amount of these staple crops in proportion to the population, with a recent tendency toward reduction. Second, all three have exceeded the needs for domestic consumption, and at the same time; while it is evident that the rate of consumption in the early years could not have been equal to that of recent years. This appears very striking with reference to corn. An explanation of the increased consumption of corn may be found in its larger use for fattening pork and beef for export as well as for domestic consumption. It has also entered quite largely, through improved manufacture of meals, starches and syrups, into table use. The consumption of oats is known to have greatly increased in its use for breakfast food. The per capita consumption of wheat, while slightly increased in some quarters through the cheapening of flour, has been diminished by the larger use of corn and oats, and a far greater variety of table food. Quite probably, however, the data as to corn raising in the first few years of this period are not complete. The years of the war made such statistics difficult to obtain. The difficulty with reference to wheat raising was by no means as great, since the wheat raising regions were more directly accessible. Third, the seasons of abundance and those of poor crops can easily be seen. It is evident that while the three crops are not always poor together, they are too frequently so to balance each other in

meeting the risks of farmers. Fourth, it appears that the fluctuations in yield are much greater in late years. This is accounted for by the greatly increased proportion of lands cultivated upon the plains of the western states and subject to greater fluctuations of climate. It will be noticed that the acreage frequently falls off in the years showing inferior yield. This shows that sowing and planting have frequently been affected by unpropitious weather. In fact, wheat fields have frequently been plowed up in the spring and not counted in return of acreage. Reductions in the acreage of wheat, however, appear frequently succeeding an immense crop. This indicates the effect of low prices. Fifth, the bearing of the total product upon the prices of these staples, while suggested by the greatly increased amount, will be more clearly seen by reference to Chart No. 6.

CHART NO. 6

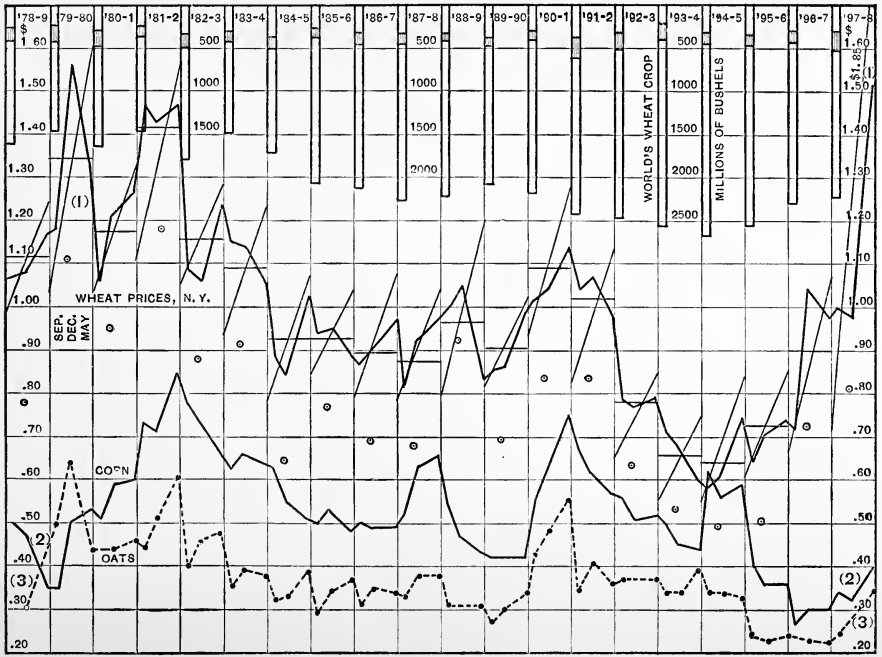
Fluctuation of prices of wheat, corn and oats in New York, 1878 to 1898.

Explanation. — This chart exhibits the average price of each of these three staples in September, December and May of each year. These months are chosen as giving without too great complication the widest range with reference to a particular season. September gives usually the price of the first of the new crop; December shows usually the fullest marketing of crops; May marks the month of largest speculation with reference to the incoming crop. Corn is less distinctly affected by these peculiarities, being subject to different conditions of the weather as well as of marketing. But the correspondence in price to a certain extent is easily perceived at a glance. The reason for this correspondence is partly in the uniform effect of seasons, as shown in Chart No. 5, and partly in the fact that either of the crops may supplement, in certain respects, a deficiency in either of the others.

Wheat prices. — With reference to wheat, No. 1 in the chart, further particulars as to prices are shown. The horizontal line in

each year gives the average price of the year; the diagonal line gives the extremes of prices, highest and lowest, within the twelve months from September to September again. The dot within the circle gives the estimated average of farm prices on the first of December, as given by the Department of Agriculture. The relation of this, somewhat constant, to the New York price for December, as given in the line directly above it, may be of interest as showing the average actual expense of bringing wheat from all over the United States to the New York market. Where the difference of the two prices is more than an average, a speculative turn in the market during December is indicated, the farm price being fixed on the first day of December. The same fact of speculation is also shown in years where the diagonal line is longer than usual.

Special variations. — At the top of the chart is shown the world's visible supply of wheat for each year, each horizontal line indicating 500,000,000 bushels. The shaded portion gives the amount exported by the United States and the part above the shaded portion indicates the amount consumed or stored within the country. Thus, in the year 1894–5 the total wheat crop of the world was 2,672,000,000 bushels, of which the United States furnished 460,000,000, 144,000,000 of this amount being exported. This year marked the lowest price of wheat in the record, together with the largest crop in the world, though not in the United States. A proportionally small amount exported explains the falling out of the bottom of the wheat market. By reference to Chart No. 5, it will be seen that while the wheat crop of that year was considerably above the average, the corn crop and oat crop were far below the average. This explains the fact appearing in Chart No. 6, that the price of wheat was lower than the price of corn at the beginning of that year. It is probable that the use of wheat as a substitute for corn in feeding stock actually saved the wheat from a still lower price. The crop of 1891, the largest on record in the United States, was accompanied by a moderate crop in the rest of the world following two other moderate crops, indeed two short crops, for the entire world. The large amount of wheat exported explains the reason why the fall of prices was not greater in this



VI. Fluctuations in prices of wheat, Indian corn and oats in New York, 1878–1898. Pages 87–91.

country. That the price did not fall faster was due to the fact, remembered by many, that farmers, as well as speculators, held to the crop with the expectation of larger demand from abroad. When the crop of 1892 was felt to be still larger throughout the world, the price fell rapidly, in spite of a smaller crop in the United States. But when the prospect of an inferior crop in this country for 1893 was felt in the spring, the price rose a trifle. Yet as soon as the harvests of the world showed an enormous crop outside the United States, the price dropped again. The crop of 1889 was a short one in the world, and apparently should have affected the price of wheat in this country more than appears; but when the total amount exported is seen to leave more than an average crop in store, it is easy to see why the price in this country did not rise. The explanation of this small exportation is in the fact that the greater part of the shortage in yield was in countries like Russia, from which no demand was felt, because the people simply went without. The starvation of people in such countries affected the demand for wheat in this country only so far as our benevolence enlarged the market. The peculiar shape of the line of wheat prices in 1889 without any correspondence in prices of corn and oats is due to a speculative movement for December wheat in Chicago. The attempted corner in wheat failed suddenly, or it might have produced a line similar to that of 1897–8, due to the famous long-continued Leiter corner.

Sources of information. — The object of this chart, taken altogether, is to show the general law of market prices as governed by supply and demand from the actual facts in the market for wheat. The facts are taken from the best records available. The prices are from the daily record of the Produce Exchange of New York. The average price for the year and the fluctuations within the year are given for the period from September 1, when the new crop appears, to the August following, this being the period actually corresponding in market with a year represented by the crop figures. The estimate of the world's crop since 1885 is taken from carefully prepared statistics in the United States Department of Agriculture. The estimates prior to that date do not include the entire world, because no statistics can be reached, but they do

include the most careful estimates of all countries whose product entered into the world's market. No effort has been made, for fear of complicating the chart, to show a similar correspondence between supply and price in reference to corn and oats. The tables following, however, give data for such comparison with reference to this country alone. The export of corn and oats has been too limited to play any great part in modifying prices.

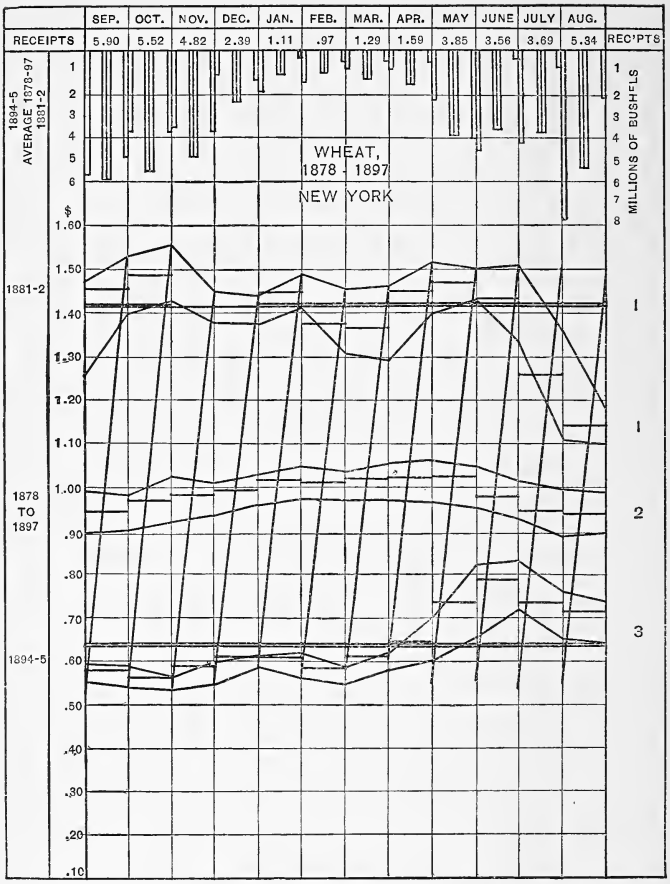
Table of production—wheat, corn, oats, 1878 to 1897
(Figures give millions of bushels)

Crop Year	Oats		Corn		Wheat					Remarks
	U. S. crop	Dec. price	U. S. crop	Dec. price	World's crop	U. S. crop	Exported	Home supply	Dec. price	
1878-9.....	571	$0 30	1,551	$0 47	1,209	420	150	270	$1 08	
1879-80....	363	64	1,547	50	1,008	448	180	268	1 56	Corner.
1880-1.....	417	44	1,717	59	1,145	498	186	312	1 21	Europe's
1881-2.....	416	51	1,194	71	1,097	380	121	259	1 43	crop
1882-3.....	488	46	1,617	73	1,270	504	147	357	1 06	alone
1883-4.....	571	39	1,551	66	1,066	421	111	310	1 14	estima-
1884-5.....	583	33	1,795	55	1,201	512	132	380	84	ted.
1885-6.....	629	34	1,936	53	2,093	357	94	263	95	
1886-7.....	624	35	1,665	49	2,113	457	153	304	90	
1887-8.....	659	33	1,456	63	2,266	456	119	337	92	
1888-9.....	701	31	1,987	47	2,221	415	88	327	1 05	Corner.
1889-90....	751	30	2,112	42	2,075	490	109	381	86	
1890-1.....	523	48	1,489	63	2,172	399	106	293	1 04	
1891-2.....	738	41	2,060	62	2,432	611	225	386	1 07	Fell to 98
1892-3.....	661	37	1,628	51	2,481	515	191	324	77	cents.
1893-4.....	638	34	1,619	45	2,562	396	164	232	68	
1894-5.....	662	34	1,212	56	2,672	460	144	316	61	
1895-6.....	824	23	2,150	36	2,552	467	126	341	71	
1896-7.....	707	23	2,281	30	2,303	427	145	282	72	
1897-8.....	698	28	1,902	32	2,227	530	225	305	99	Corner.

CHART NO. 7

Annual fluctuations in the price of wheat. Highest year, lowest year, and average of twenty years in New York, 1878 to 1897

Explanation.—This chart is intended to show the tendencies of the market for wheat from month to month throughout the



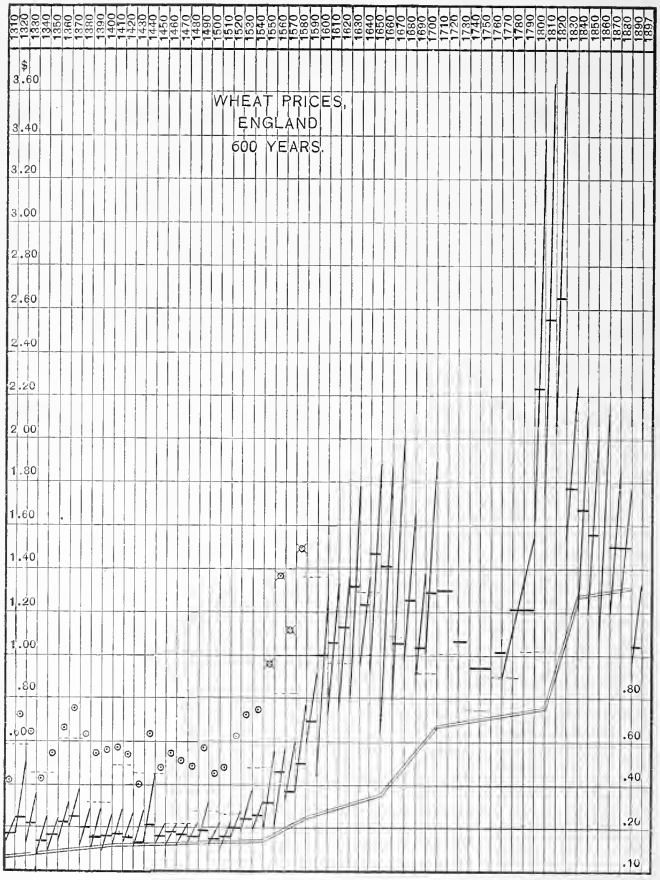
VII. Annual fluctuations in the price of wheat in New York, 1878–1897. Page 91.

market year. In the center is given the averages of highest prices and of lowest prices for each month in the New York Produce Exchange during the period from September, 1878, to August, 1897, inclusive. The horizontal lines between the averages of extremes give the average price for the twenty years in the several months. The diagonal lines give for each month the extreme fluctuation during the twenty years. Above the lines of averages are given the fluctuations by months in the year 1881–2, the year of highest prices. The upper of the two continuous lines gives the top prices of the month and the lower the bottom prices. The short horizontal lines give the average price for each month ; and the double horizontal line across the chart represents the average price for the year. Below, the fluctuations in wheat prices for 1894–5, the year of lowest prices, are shown in the same way. At the top of the chart are given, in millions of bushels, the receipts of wheat in New York. The shaded double column in the center under each month gives the average receipts for twenty years. To the left, a single column shows the receipts for 1894–5. To the right, a single column gives the receipts for 1881–2. Since the receipts at New York are chiefly for export, the general correspondence between receipts and prices is rather a result of a larger application of supply and demand than an exposition of it. The chief use of the chart is to show the fluctuation of prices under varying local conditions. The figures on the left give the price per bushel, and the figures on both left and right at the top indicate millions of bushels.

CHART NO. 8

Prices of wheat in England for 600 years, 1300 to 1900

Description.—This chart is to show at a glance the history of the wheat market in England for the past six hundred years. The record of the first four hundred years is taken from Rogers' "Agriculture and Prices." That for the eighteenth century, less complete, is taken from Schoenhof's "History of Money and Prices." The nineteenth century record is from the report of the statistician of the United States Department of Agriculture. All



VIII. Prices of wheat in England, 1300-1890. Page 93.

are reduced with care to the basis of bushels and dollars and cents. The figures on the right and left show the price per bushel in United States money.

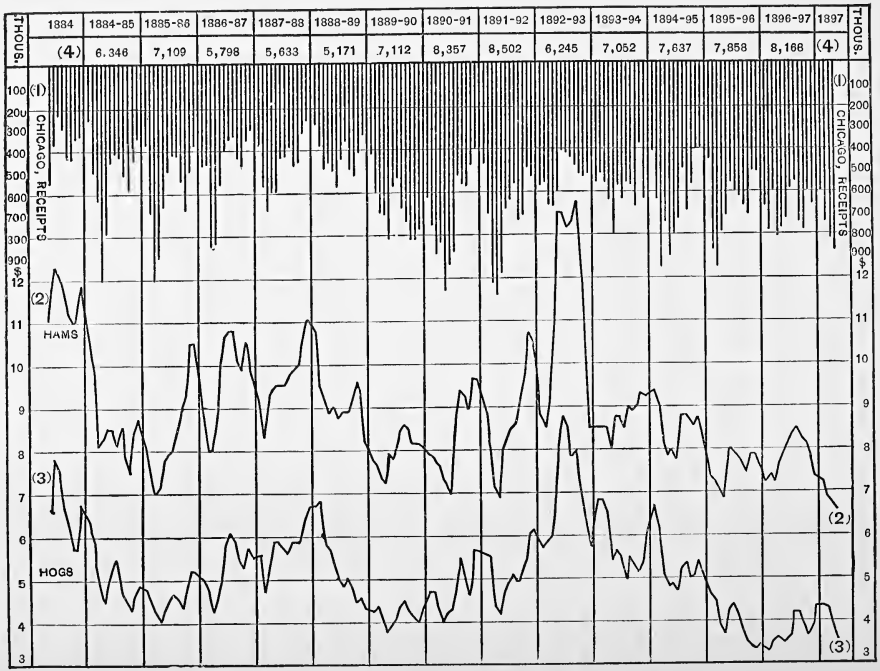
Explanation.—The heavy horizontal lines show the average price during a period of ten years, though in a few instances the period is longer. The diagonal lines show the extremes of fluctuation during the period which they cover. During the first two hundred and fifty years the coinage of England made the shilling in which prices were reckoned a much larger unit, practically three times as great as at present. The dots within circles indicate where the horizontal lines might have been had the unit been always the same. The same dots crossed cover a period of forty years in which prices are somewhat uncertain, from transition between the old standard and the new. The beginning of the nineteenth century shows a remarkable condition of the wheat market, due chiefly to the wars in which England was engaged, together with issues of paper money affecting the standard of value. The record is especially interesting from showing, first, the great fluctuations natural from unequal seasons; second, the gradual increase in cost of production under the law of diminishing returns; third, the effects of changes in money legislation; fourth, the effect of extra consumption in times of war; and fifth, the effects of the present world-wide commerce in overcoming the law of diminishing returns. A more complete record for the eighteenth century would add to the interest, if not to the effectiveness of the chart.

Relation to wages.—For convenience of comparison, the average price of wheat in France during periods of twenty-five years, as given by Schoenhof, is added by dotted horizontal lines. The double line across the chart indicates the range of average day's wages of house mechanics in England, without indicating the extreme of fluctuations. It seems evident that wages and subsistence have something in common.

CHART NO. 9

Prices of live hogs and green hams in Chicago, 1884 to 1897

General description.—This chart exhibits the fluctuations in prices of live hogs and green hams as shown by reports of the



IX. Prices of hogs and hams in Chicago, 1884-1897. Page 95.

Chicago Board of Trade from September, 1884, to August, 1897, together with the visible supply of live hogs in the market from month to month and for the entire year. The figures to right and left give dollars per cwt. of live hogs, and per barrel of green hams. The figures upon the upper third of the chart, right and left, indicate the number of thousands of live hogs received in Chicago during the successive months, as indicated by the dark lines. The figures at the top of the chart under the date line give the number of thousands of hogs received during the entire year. The year is taken from September to August following, because the hog crop is in large measure dependent upon the corn crop coming into use in September.

Prices of live hogs.— No. 3, irregular line, gives the fluctuation of top prices in every month from September, 1884, to August, 1897, for fat hogs. The total range is between $3.30 per cwt. in September, 1896, and $8.80 in February, 1893. A somewhat striking general correspondence is readily seen between this line of prices and a line connecting the ends of the lines indicating the monthly supply of live hogs at the top of the chart. The average price of the year is easily seen to be low when the supply for the year is high, and high when the supply is low, though in some instances the effect of an increased supply is evidently anticipated in the prices. Thus, an increase of 2,000,000 of hogs in 1889–90 over the supply in 1888–9 is anticipated by falling prices during the early part of 1889. In a similar way, the effect of a diminished supply in the summer of 1895 is not so marked upon the prices as might have been the case had not the prospect been strong for a large supply in the fall of 1895. Whatever influence the local manipulation of the market may have had, it is perfectly evident that conditions of supply and demand have overwhelming influence.

Prices of green hams and mess pork.— No. 2, giving the range of prices per barrel of green hams, shows fluctuations in some respects corresponding to the prices of live hogs, but with variations due in a measure, undoubtedly, to speculative interests in these products. The range is from $6.60 in December, 1897, to $13.80 in May, 1893, corresponding with the range in the prices of live

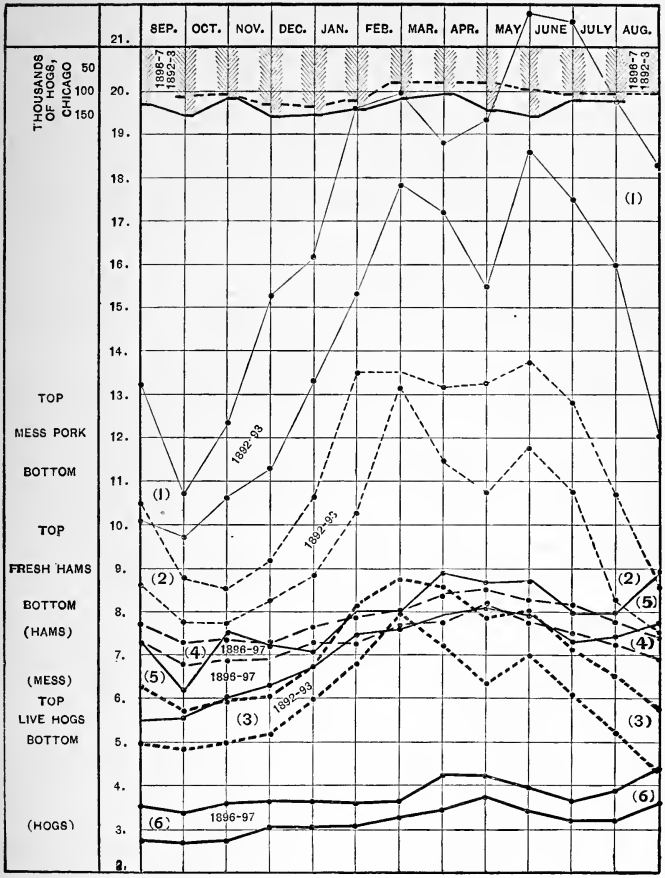
hogs. Were there room upon the chart, it would be easy to show an almost exactly corresponding fluctuation in the prices of mess pork, which article is one affected largely by speculation, though even that speculation is dependent upon prospective supply and demand. The prices of mess pork at the New York Produce Exchange during the same period ranged from $9 a barrel in 1885–6 to $15.80 and $15.60 in 1887–8, $14.20 in 1889–90, $11.75 in 1891, $14.20 in 1892, $22.60 in 1893, and gradually down to $7.25 in 1896–7.

CHART NO. 10

Prices of hogs and pork products at Chicago Board of Trade for 1892–3 and 1896–7, the highest year and the lowest year

Annual fluctuation, 1892–3.—This chart presents a comparison between the prices of live hogs, fresh hams and mess pork in the year of highest range, with the prices of the same in the year of lowest range. The figures on the left indicate the prices per cwt. of live hogs and per bbl. of green hams and mess pork. No. 1 gives, in the dotted line above the date figures, the highest price of mess pork in each month of the year, while the dotted line below the date figures gives the lowest price for the corresponding months. The range in any month is found in the distance between the heavy dots on the line following the name of the month. Thus the highest price in April, 1893, is $19.35, and the lowest price in the same month, $15.50. The range throughout the year is from $21.80 in May to $12 in August. No. 2 gives the same facts with reference to the prices per barrel of green hams; and No. 3 gives the corresponding facts as to prices of live hogs.

Annual fluctuation, 1896–7.—Nos. 4, 5 and 6, marked by more distinct lines, show the range of prices for these three related articles of commerce for the year 1896–7. No. 4 gives the prices of green hams, which in this year averaged higher than the prices of mess pork, although the fluctuations of mess pork are the greater. At the top of the chart are given in thousands the number of live hogs received in Chicago during the two years.



X. Prices of hogs and pork at Chicago, 1892-3 and 1896-7, highest and lowest year. Page 98.

On the right of each month are the numbers for 1892–3; on the left the numbers for 1896–7. The lines connecting the shaded portion show the fluctuations from month to month in the supply. A general, though not a perfect, correspondence is perceptible.

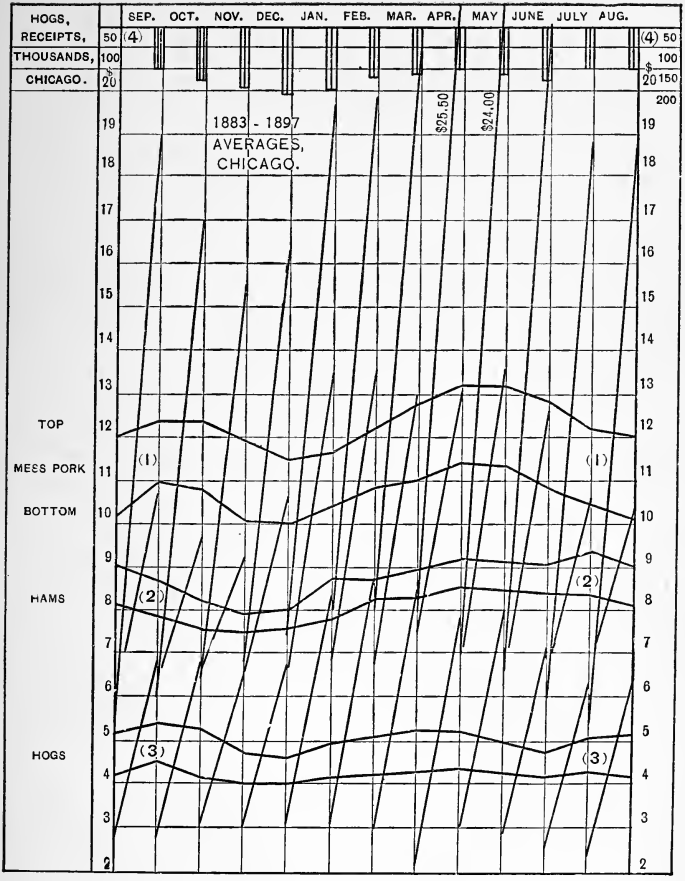
CHART NO. 11

Annual fluctuations in pork prices in Chicago—average of fifteen years

Average annual fluctuations.—This chart is intended to show the annual range of prices as shown by reports of the Board of Trade of Chicago, from September, 1883, to August, 1897. The figures, right and left, give prices per cwt. of live hogs, and per barrel of green hams and mess pork. The figures opposite the shaded lines at the top indicate receipts of live hogs in thousands, by the average in each month, for the fifteen years. The year is taken from September to August following, for correspondence with the crop year, as in previous charts.

Explanation.—No. 1 gives in the upper continuous line the average of top prices for mess pork in successive months; and in the lower line the average of bottom prices for the same months. The long, diagonal lines show the extreme of fluctuations in each month during the entire fifteen years. Thus the lowest price reached during the month of April in any year was $8.05, while the highest was $25.50. The lowest price in November of any year was $6.40, while the highest price in the same month was $15.50. No. 2 gives in the same way the average of top prices and bottom prices during the fifteen years for green hams; and by its diagonal lines, the extremes of fluctuation. No. 3 presents a corresponding showing of average top and bottom prices of live hogs, with extreme fluctuations. No. 4, at the top of the chart, gives the average receipts of live hogs in Chicago during the several months of the year, counted in thousands.

The supply of hogs.—The correspondence between the receipts of live hogs and the average market price in each month



XI. Annual fluctuation of prices of pork in Chicago, 15 years. Page 100.

XII. Prices of cattle and beef in Chicago, 1884–1897. Page 103.

is worthy of study. Every farmer can see in what months of the year the market is fullest. It is also evident that the fluctuations in mess pork are much more extensive than in live hogs or fresh products. This is doubtless due to the possibility of speculation in a product which can be held for future market. Nevertheless, it is quite evident that the prices of mess pork have some direct connection with the supply available.

CHART NO. 12

Prices of cattle and mess beef in Chicago, 1884 to 1897

Description.— This chart is planned to show the prices of cattle and the prices of mess beef from month to month from September, 1884, to August, 1897, together with the supply of cattle received in Chicago in each month and for each year. The figures right and left on the lower part, give in dollars the prices per hundred pounds live weight, and per barrel of extra mess beef. Above, to right and left, the figures indicate thousands of live cattle received in Chicago.

Explanation.— No. 1 gives the lowest price in successive months of lowest quality of beef steers. No. 2 gives the highest price in successive months for stock cattle. No. 3 gives the highest price in successive months for best quality of beef steers. No. 4 shows the fluctuations in the highest price per barrel of extra mess beef from month to month. No. 5 shows, by length of lines in each month, the receipts of cattle in Chicago by thousands. No. 6 gives the number of thousands of cattle received in each year. As in previous charts, the year runs from September 1 to August of the year following, though the relation of the beef market to the crops of the year is not so marked as that of the pork market. Although the correspondence in prices between these various parts of the cattle trade is not absolute, it is too striking to be consistent with independence of causes. The price of stock cattle has some elements not found in the price of beef cattle; and the price of lowest quality of beeves for canning purposes is naturally more uniform than any other prices.

CHART NO. 13

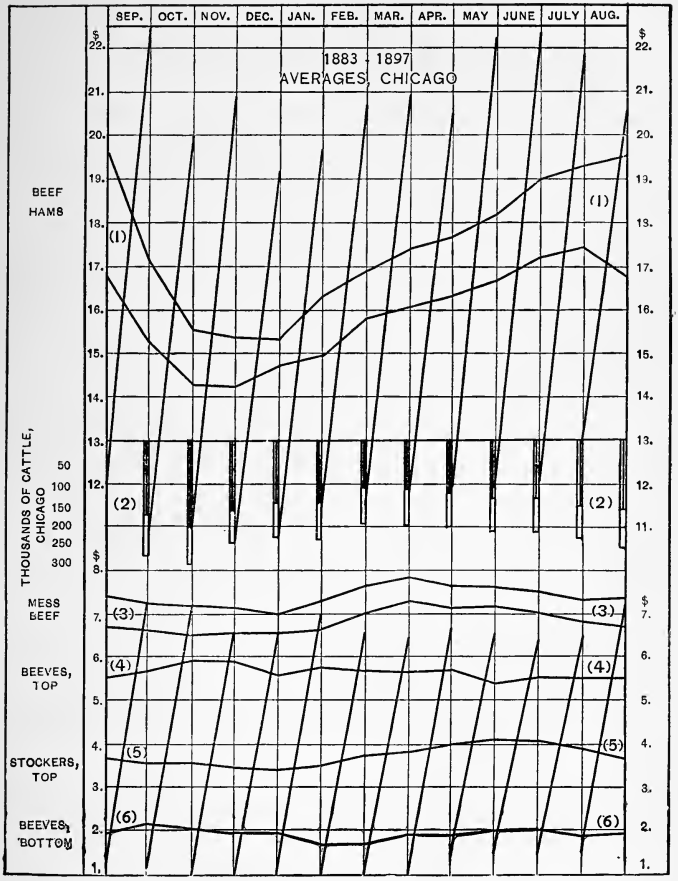
Annual fluctuation in prices of cattle and beef, Chicago, 1883 to 1897

Explanation.— This chart is intended to illustrate the changes of prices in successive months upon the average of fifteen years, as to stock cattle, beef steers, mess beef and beef hams. The data are taken from the daily records of the Chicago Board of Trade, from September, 1883, to August, 1897. The figures to right and left indicate prices in dollars per hundred pounds live weight, and per barrel of beef products. No. 1 indicates the range of prices for beef hams. The upper line gives the average of highest prices in each month for fifteen years. The lower line gives the average of lowest prices for the same period. The diagonal lines give the extremes of prices within the fifteen years.

Mess beef and beef steers.— No. 3 gives the average of highest and lowest prices for mess beef. Nos. 4 and 6 give respectively the average of highest and lowest prices for beef steers. The diagonals give the extremes for beef steers during the entire period. No. 5 gives the average of highest prices for stock cattle.

Supply of cattle.— In the center, No. 2, is given the average receipts of cattle in the Chicago market for each month. The unshaded portion at the end of the lines, represents the average reshipment of cattle. Thus September, on the average, brings 265,000 cattle to Chicago and reships 90,000 ; while October brings nearly 283,000 and reships 82,000.

Peculiarities of mess beef market.— It will be noticed that the prices of beef hams give an annual curve, entirely distinct from either of the others. This indicates the fluctuation in demand entirely out of keeping with the supply. It is quite possible that the opening and closing of navigation upon the Great Lakes may be an important influence. Certainly the change of the season between cold and heat is an important element, since the lowest month, and that of least fluctuation, is December. The month of highest prices is August, and those of greatest fluctuation are May, June and September. The curve of prices for mess beef has a fair correspondence with the numbers of cattle slaughtered in



XIII. Annual fluctuation in prices of cattle and beef in Chicago, 1883-1897. Page 104.

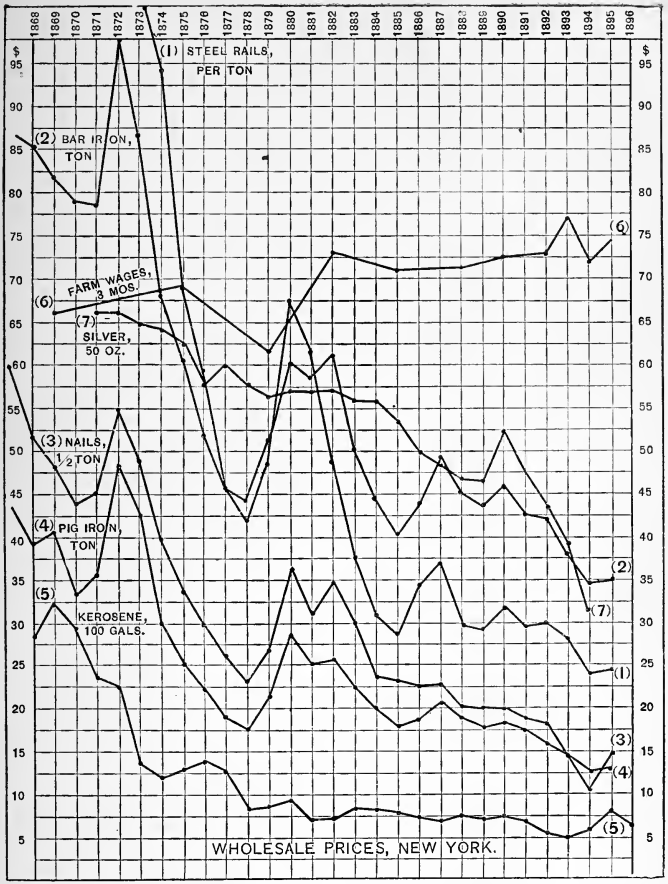
Chicago. The line indicating top prices of beef cattle has peculiarities of its own, because it stands for quality as well as quantity, representing the fancy lots, which are necessarily somewhat more irregular than the average. The line of prices for stock cattle is evidently affected by the variations in demand by feeders. The line of lowest prices for beef cattle, No. 6, is quite probably affected by quality as well as supply.

CHART NO. 14

Prices of iron, kerosene, etc., 1867 to 1896

Description and Explanation.—This chart gives the prices from year to year for steel rails, bar iron, pig iron and nails in the New York market, each dot indicating the average for the year. The average prices for the corresponding years for refined kerosene are also shown. No. 1 gives prices per ton of steel rails, into which enters all the influence of the improved methods of manufacture. No. 2 represents the prices of bar iron per ton, less affected by improvements but influenced by the substitution of steel. No. 3 gives the prices of nails per thousand pounds. For comparison with the other prices of iron, the prices of nails must be doubled. All will realize the immense improvements made in the manufacture of nails. No. 4 gives the prices per ton of pig iron. It is evident that all these forms of iron and steel have stood in the market under the same general influences, with slight modifications from special characteristics of production or use. No. 5 gives the average price in each year for one hundred gallons of refined kerosene oil. The price per gallon can be found by reading the figures as cents instead of dollars. In the same way the price of ten pounds of nails can be found. It should be said, however, that all these prices are the wholesale prices, retail prices being subject to local influences, sometimes even to custom, which prevents their adhering closely to the prices in larger markets.

Even monopoly affected.—These articles have been chosen as illustrating the essential law of prices even under the advance of



XIV. Wholesale prices of iron, kerosene, etc., New York, 1867–1896. Page 106.

combination of capital upon an enormous scale. The iron industries and the Standard Oil Company come nearest, perhaps, to fulfilling the conditions of monopoly found anywhere. Yet the actual effect of improved methods in great combinations is seen to have reached the mass of the people in spite of any tendency to sustain prices by combination. A line, No. 6, indicating the general trend of wages for farm hands in the North, is added to more clearly indicate the distribution of welfare through such improvements in method. For still other purposes, the fluctuating price of silver bullion is shown in line No. 7.

CHAPTER X

EXCHANGE—ITS MACHINERY

Free communication.—From what has been said in the preceding chapter as to the nature of value and price, it will appear that the most fundamental condition for ready exchange is perfectly free communication between individuals as to wants and abilities to meet wants. There is implied, also, an absolute protection of property rights and of equity in dealing through the laws and customs of the community. No one acquires property for the purpose of exchange unless he can foresee the possibility of carrying out the exchange at any future time. He must also feel that he is protected by surrounding circumstances from misinformation as to values. In short, any community is ready for free exchange among its members only when it maintains the conditions for fair competition. To this fairness of competition many things contribute, aside from the governmental machinery. There can be little trade without a common language, and the full advantages of common speech are reached through every facility for ready communication between all the individuals of the community. An universal press, postal facilities, telegraph and telephone systems have all grown up in meeting this need.

The same is true of established market places, boards of trade and produce exchanges. Not only does the multitude of exchanges in one place lessen the cost of such exchanges, but these make it possible for multitudes to reach a fair understanding of what is wanted and what is offered in any line of production. This need accounts for the tendency so frequently noticed to establish great centers of trade in particular commodities. The world wants a fair understanding of what the world contains, and these methods of bringing together buyers and sellers are the natural outgrowth of this need.

Full statistics.—The same end is served still more fully by frequent publication of price-lists, and a daily record of the transactions in any market gives information which every dealer can use to advantage. Public statistics, carefully and honestly prepared, serve both buyers and sellers of any article of commerce. The farmer needs as much as anybody the fullest information as to what his fellow farmers have to sell, whether they are immediate neighbors or in distant parts of the world. The price of wheat on any farm ought, if perfect understanding is reached, to conform to the general law of supply and demand throughout the world, and the yield of wheat in Russia, India and South America affects the value of every bushel raised in our country.

Every advance in the perfection of statistics and the rapidity of collection makes more certain the bargain of every producer and consumer. People have sometimes opposed the gathering of statistics for fear that large dealers and speculators may take unfair advantage from

such information. But a careful consideration will show that managing of the market depends chiefly upon want of information on one side of the bargain. If farmers were as thoroughly informed as to the crops of the world as carefully collected statistics might make them, no false rumors could mislead them in selling their produce. The evident tendency toward more stable markets, as shown by the records of the last twenty years, is accounted for partially, at least, by the more perfect information available. If farmers themselves would take interest in furnishing accurate estimates of the extent and condition of every product held for sale, they would in the long run reap the highest advantages of clearly understanding the supply and demand in the markets of the world. This would do more to destroy the demoralizing force of mere speculation than any possible legal enactment.

Ready transportation.—An equally important part of the machinery of exchange is easy transportation. Every improvement in the transportation of persons or products not only lessens the cost of the article when delivered, but increases the actual stability of price and range of the market.

The pioneer farmers of northern Ohio found absolutely no market for their wheat until the opening of the Erie canal. Farmers upon western prairies found corn their cheapest fuel until railway transportation brought coal mines and corn fields into closer relations. The rural community which takes pains to have good roads not only lessens the cost of hauling grain to market by saving friction and toil, but actually

enlarges its market at home. Hard roads enable them to do four times the work they can do on soft roads. In the same way any improvement of railroads, construction of pipe lines for gas and oil, or introduction of pneumatic tubes for mails and light packages in cities, directly spreads the range of market for the products of every individual laborer and makes more sure the returns for any effort he may give in production. Perhaps this is even more easily seen by considering how the world's markets are opened by improvement in water transportation. Water freight on a bushel of wheat from Chicago to New York from 1865 to 1874 averaged over twenty-two cents; from 1885 to 1894 it was less than seven cents.

The universality of markets for all kinds of products is clearly shown by realizing what we have within reach of every country community today. Such easy transportation adds to the productive abilities of every person. Over ordinary roads the cost of transporting wheat two hundred miles is equal to its value at the end of the journey. Corn will usually pay its way not more than half that distance. So in countries where railroads do not exist the people consume only what they themselves produce, or devote themselves to very few products, and so occupy only a portion of their time. In the best developed regions of our country, every family can reach a steady supply of all kinds of goods, and can know that every article produced has its proper place in the market without waste. The cost of delivering bread in Boston is greater than the cost of carrying the flour in it two thousand miles. This ready trans-

portation leads to more complete and more definite occupation and so to larger returns in the way of satisfaction from all efforts. The extended market gives added value to all permanent or fixed capital. It makes both farms and homes more useful, if full advantage of such improvements is taken. At the same time, values of land tend toward an equality throughout the world.

Diminishing cost of transportation.—That the cost of transportation keeps diminishing in spite of combinations of capital to prevent it, and in spite of local legislation restricting it, proves that the increasing perfection of machinery and the accession of capital in railroads and waterways are stronger than the purposes of men. That freights are regulated by "what the traffic will bear" is merely another way of saying that transportation comes under the universal law of values —what the service is worth in the market, or what people are willing to give for it. According to good authority, the net profit of carrying one ton of freight one mile has fallen in twenty-five years from one cent to less than one-ninth of a cent. The same principle fixes a classification of freight according to service. We can afford to pay more for carrying valuable produce than for carrying cheaper products. It also leads to special rates for developing traffic, as illustrated in rates on baled alfalfa hay from western plains to Chicago.

Wise managers, if not misled by speculation in stocks, care more for enlarging traffic than for immediate returns upon a smaller bulk, because the bulk of profit is greater. A good illustration of development

of a special traffic is found in the milk trains running two hundred or three hundred miles to supply the city of New York. The railroads are compelled by the needs of the traffic to carry the milk cheaply enough to prevent its being made into butter and cheese. Laws regulating this charge are effective, because such a necessity exists in the nature of the case.

Weights and measures.—Another important growth in the machinery of trade is found in standards of quantity,—weights and measures of every kind. It is scarcely possible to realize the uncertainty of exchange without exact weights and measures. The story of the Indian trader who bought furs by weight, putting his hand upon the scales for one weight and his foot for its double, illustrates how uncertain such judgments of quantity may be without system. The present names of weights and measures indicate their origin in similar ways.

Measures have usually been connected with some part of the body: as "finger," used one way in measuring the load of a gun and another on a stocking; "hand," still used in measuring the height of horses; "span," once considered sufficiently definite for any measurement; "foot," now made to conform to an accurate system; and "pace," still used in many communities. Connected with the arm, are "cubit" and "yard." Many ladies still measure their dress goods by arm's lengths. For small measures, "grain" and "barleycorn," still used as names, indicate dependence upon average quantity in articles of general growth.

Today all civilized governments settle upon a defi-

nite system of measures and weights, all accurately connected with each other and with some precise dimension in nature supposed to be invariable. Our common yard is distinctly associated with a pendulum vibrating seconds; and in the great decimal system, adopted by most countries in Europe, and likely to be reached in all countries, the whole is connected with a measured meridian upon the earth's surface. Care is then taken to have standard measures and weights prepared in such a way as to be free from all effects of any change of temperature, and legal enactments distinctly define each measure and weight, actually punishing one for the crime of using false weights or measures. Units of quantity thus enter into all our calculations and form an essential basis of all exchange. Cheating in measure and weight grows less and less possible with this clear understanding of exact units. The New York Legislature has defined the size of fruit packages, and the Massachusetts poultry raisers ask a law requiring eggs to be sold by weight.

Metrical system.— If the whole world should unite on a single decimal system of measures and weights, like that now used in most of Europe, all would be gainers from the reduction of misunderstandings and miscalculations increasing the cost of exchange. The difficulty of adopting a new system arises chiefly from the absolute importance of any system and the unconscious use of that to which people are already accustomed, together with its application in a thousand unthought of ways to every tool and every rule. That the advantage of a uniform decimal system would more

than balance the difficulty of change, no student of the subject now doubts. Some have estimated the saving at nearly one-half of the present clerk hire. Our government has already taken steps for such a change, though years may be required to accomplish it.

Standards of quality.—The machinery of exchange also involves standard units of quality, but these must vary with every different kind of commodity. Custom has given rise to all sorts of devices for expressing degrees of fineness, strength and hardness, as well as more delicate qualities of flavor and odor. Boards of Trade often establish offices of inspection with brands upon grains, flour, butter, pork, etc., and these become definite parts of a contract which the government rightly enforces. Private trade-marks and brands, if honestly used, become a prominent element in exchange. These are protected rightly by being filed with the government, which secures to the originator his sole use of such a proof of quality.

In some articles of trade, when a whole community is interested, the government goes further and undertakes inspection and branding by an official. This in most states applies to kerosene oil, first for public safety, but afterwards for protection of exchange. Laws regulating the quality of fertilizers are based upon the necessity of knowledge, that bargains may be fair; and in many parts of our country now the branding of ground feeds, with an analysis of their qualities, is deemed an essential of safe bargaining. The extent to which this effort to establish the certainty of qualities may need to be carried can be estimated by the recent

agitation over adulterations of food products. All believe that, as buyers, they have a right to know the quality of what they buy. It is conceivable that markets may some time establish a system of terms, descriptive of qualities, almost as definite as weights and measures. All this contributes to fair competition in exchange.

Standards of value.—More important still in the machinery of exchange is a standard unit of value. We have seen that value in any article of commerce can be fixed in terms of any other article, but prices remain indefinite so long as there is want of universal appreciation or appraisal in essentially the same terms and ideas. The tendency toward definite prices in well understood units of value is as clearly perceptible in the progress of commerce as is the tendency toward definiteness in weights and measures.

In early ages almost any article of common use, so that its qualities might be generally understood, has served as a standard of value, in terms of which all wealth has been estimated. Communities engaged in grazing counted all their wealth by cattle. Homer's heroes wore armor valued in cattle, and early Roman coins bore the images of cattle, while the very name of Roman coins, *pecunia*, is supposed to have been derived from the name of the flock. Communities of fishermen for a long period have estimated wealth in dried fish. More mechanical peoples have used some article of manufacture, like nails in some Scottish villages and the country cloth of western Africa. Sometimes a single prime article of export has served the purpose,

like tobacco in the colony of Virginia and dried hides on the plains of South America. In most of pioneer America the hunters' pelts have served the same purpose, the average "coonskin" having a value which all could understand. As communities became more wealthy the display of wealth in ornaments made of precious metals and in precious stones has led to the use of these as standards of value. American Indians used their wampum, and African tribes employed peculiar shells. But as commerce increased, embracing wider regions, gold and silver became the staple article of value everywhere, since these, so easily tested for purity, could have their value estimated definitely by weight. Thus the standard unit of value has been definitely connected with standard weights.

Coinage.— Gradually these weights, for greater ease of transfer and for clearer understanding of values, became the basis of coinage. The stamp of the coiner became a certificate of quality and quantity, and finally, as in the case of weights and measures, governments assumed the whole responsibility for fixing the weight and fineness of coins, and reduced all coinage to system, that every citizen might know the value of the unit in which he estimates any article of commerce.

The early coins were definite weights of gold, silver or copper, and in many countries coins still bear the names that indicate their original weight. Yet arbitrary rulers have often sought to cheat their subjects by issuing coins of lighter weight and baser metal. The French livre, now the franc, is one seventy-second of its original value. English coins were debased ten

times between the years 1299 and 1601 to exactly one-third of their original value. The loss from such debasement falls almost wholly upon the poor, whose wages fail to buy the usual food and clothing. Henry VIII reduced the coins of his realm again and again, until it would have taken five years' revenue of Elizabeth's reign to restore the currency. Elizabeth chose to take the standards as she found them, but to establish an absolute degree of purity and fix by law the weight of each coin in the system. The standard of purity since maintained in England is 22 carats, or eleven-twelfths fine, and weights have been maintained in spite of several efforts to reduce them. Other nations have taken similar steps with varying standards of purity: .835 in the Latin union, .9 in the United States, and over .96 in most coinage of western Asia. In this way the standard of value for every citizen of a country is as clearly defined as the standard of weight, and every transaction in trade, with every account of such transaction, involves that unit.

United States coinage. — A brief statement of the system of coinage now established in the United States may illustrate the definiteness of the standards of value. The United States mint at Philadelphia and its branches at New Orleans, Denver, San Francisco and Carson have the sole authority for making coins. Any effort at coinage by outside parties is criminal. The mint receives the gold and silver by weight and assay of purity, melts and refines and mixes with alloy, to bring the mass to required fineness, nine-tenths pure, and casts the metal into bars called bullion. These bars are

then most carefully assayed, and, if found of exact standard purity, are rolled and drawn into plates the thickness of the coins desired. From these plates disks are punched by machinery, each disk being weighed, and if found too light thrown aside, if too heavy reduced by filing, until every disk represents exactly the required weight of the coin desired. The disks then pass through a milling machine which raises the edges, and when cleaned by dilute acid and carefully dried, are stamped by a steel die with some device covering both surfaces completely. This effectually gives the seal of the nation to the purity and weight of the coin, and, since it covers the whole surface, prevents the possibility of reducing that weight without marring the coin.

United States standards.— The system of coinage in the United States since 1873 embraces standard coins of gold, silver, nickel and copper, but gold alone actually furnishes the standards of value, all other coins being at present subsidiary. Gold is coined for individuals free; that is, a certain weight of metal presented at the mint is assayed, to determine the exact weight of pure gold, and an equal weight of pure gold is returned to the owner in coin. Sometimes a slight charge for the expense of coinage is made and called seigniorage. At present no such charge is made, for the reason that when a nation bears the cost of coinage, foreign coins are kept from circulation, and its own coins are current everywhere.

The standard unit of value for the United States is 25.8 grains of gold nine-tenths fine, and this is called a

dollar, although no coin of this weight is at present struck. In actual practice, the standard is shown in the ten-dollar piece, or eagle, weighing 258 grains. The half eagle (five dollars) and the quarter eagle (two dollars and fifty cents) indicate upon their face their relation to the principal coin. The double eagle, or twenty-dollar piece, is coined for greater convenience. These coins connect all the currency of the country directly with the market value of commodities in the world, through gaining their value directly from the market value of gold, where gold is bought and sold. Thus gold furnishes the standard of value with which all other values are compared.

Silver coins of the United States are made from silver purchased by the government. The dollar, adopted from the Spanish rix-dollar, itself derived from the German thaler, is by law a coin of 412½ grains of silver nine-tenths fine. This silver dollar has a story of its own, which will be given later, and does not form a part of the system of 1873. The half dollar, the quarter dollar, and the dime, for fractional currency, are proportional parts of 385.8 grains of silver nine-tenths fine. These are about five per cent less in weight than the proportional parts of the silver dollar. The original purpose of this reduced weight was to prevent the consumption of these coins in ordinary uses by making them worth on the face a little more than their bullion value. These fractional coins are legal tender in the courts to the amount of five dollars. In nickel and copper coins no effort has been made for many years to maintain a standard of value, the amount of metal in any of them being

far less in value than their face. They are legal tender only to the amount of twenty-five cents.

Fluctuation of standards.—In the study of the precious metals as the standard of prices, it is necessary to remember that the value of these metals, like that of all products of labor, is subject to considerable fluctuations. The very fact that gold and silver are durable metals, not easily consumed or readily worn away, tends to make the increased product in a series of years less and less valuable. While the ordinary increase in product may be provided for by increased demand through extended exchange, the very improvements in the machinery of exchange, especially the extension of general credit, operate in the opposite direction.

It is certain that the value of gold and silver within one hundred years after the discovery of America, when European nations took possession of accumulations among the inhabitants of Central and South America, diminished to a little more than one-fourth of the value previous to that discovery. It is estimated that the value of gold since the discovery of 1849, in California, followed by the opening of mines in Australia and South Africa, has been reduced to little more than three-fifths of its value in 1850. This estimate is based upon careful comparisons between what an ounce of gold in 1850 would buy of some hundred staple products, and what the same ounce of gold will buy today of the same hundred products. The test is a somewhat uncertain one, from the fact that many products are much more affected by improved methods of production than others, and changes of habits and customs among the

people greatly affect the prices by changing demands. The combination of a large number of products being less likely to be affected than any one, the comparison is worthy of some confidence. Nevertheless, it is possible for two different persons, making different selections for comparison, to arrive at very diverse results. If the selected articles are those of ready manufacture where improved methods have most largely entered, the value of gold will seem to have increased; if, on the other hand, the selected articles are raw materials, in which the law of diminishing returns gives greater cost of production, the value of gold will seem to have diminished.

A test easily applied, though not absolutely correct, is in the amount of labor of the most common sort which an ounce of gold would pay for at the different periods compared. Careful comparisons show that an ounce of gold today buys more of all sorts of manufactured articles and more of most articles of food, though less of the better class of meats and less of labor, than ever before. This fluctuation in the value of gold has its chief importance in connection with long extended credits, though its influence is felt in other directions through a common system of accounts, in which the standard unit of some system of coinage is the sole basis of comparisons. If the standard unit is growing less valuable, in a series of years the book-keeper will show a constantly increasing total of wealth; if, on the other hand, it is growing more valuable, the books will show an apparent loss. Were a perfectly uniform standard possible, all interests would be best provided for.

Ratio of silver to gold.—More directly important in its effect upon exchanges is the unequal fluctuation of gold and silver when both are made the standard of value. That silver and gold are from independent sources, subject to variations of their own in product and processes of extraction, makes it impossible that they should sustain always the same ratio to each other in value.

A careful study of the subject by Professor Rogers shows that early in the thirteenth century one pound of gold was worth ten pounds of silver, at the close of that century would buy twelve and one-half pounds of silver, and in the middle of the fourteenth century bought thirteen and three-fourths pounds; but in the fifteenth and sixteenth centuries, after the new world was pillaged, one pound of gold bought from ten and one-half to twelve pounds of silver. In the seventeenth century fifteen pounds of silver went for one pound of gold, and in the eighteenth, fifteen and one-half pounds. Early in the nineteenth century the ratio was fixed in this country at sixteen of silver to one of gold, and that estimate was assumed to be essentially correct as late as 1877, when a pound of gold would exchange in the market for three and one-half pounds of platinum, seven pounds of aluminum, sixteen pounds of silver, seventy-one pounds of nickel, 942 pounds of tin, 1,696 pounds of copper. Twenty years have produced great changes in both the total annual products and the relative cost of mining. The estimate of 1877 would now be incorrect for any of the metals named. A pound of gold now buys 1,540 pounds of aluminum, the

change being due to an invention for reducing aluminum ore. It now takes about thirty-seven pounds of silver to pay for one pound of gold, a change in part due to new systems of coinage in which silver plays a subordinate part, but chiefly due to the greatly increased product of rich mines and greatly improved methods of reducing ores.

The cheaper money drives out the good money.—In any system of coinage, employing both silver and gold as standards, it is found by actual experience, repeated hundreds of times, that a change in the ratio between the two metals in open market always leads to hoarding for speculative purposes of the most costly metal of the two.

Thus, in our country previous to 1873, when silver was worth more than one-sixteenth of its weight in gold, uncoined silver was necessarily worth more than coined silver for some purposes, and the coins already struck were worth more in the manufacture of spoons and plate than to circulate as coins. Prior to 1853, when the half dollars, quarter dollars and dimes were coined at the ratio of sixteen to one, such coins could not be kept in circulation, for the reason that they were worth more than their face value. The law of 1853 reduced the weight of these coins so that their market value as silver was sure to remain a trifle less than their face value. The result was no further melting up of these small coins for use in the arts or for bullion. This fact is only one illustration of what is called Gresham's law, formulated in the time of England's base coinage during the sixteenth century, but noticed centuries

earlier, that *cheap money always drives out a more costly money*. The principle is as constant as human nature, that nobody will give a greater value when a less value will serve the same purpose. For this reason, no country in recent times has been able to keep both gold and silver as the actual standards of value at the same time. Either the ratio must be changed with every fluctuation of either metal, or one of the metals must be undervalued in the system of coinage, as has been done in England for the greater part of this century; or else the total coins of the cheaper metal must be limited in amount, as has been done by the Latin Union in Europe during the last twenty-five years. In either case the tendency is toward a single standard. The commercial world prefers a stable, well understood unit to a changeable one. And while the fluctuations of gold alone affect somewhat the stability of prices, these are thought of less importance than the necessary legal adjustments for new systems of coinage.

Monometalism and bimetalism.—The discussion has led to two opposing views, distinguished as monometalism and bimetalism. The monometalist holds that since one metal only can, under ordinary circumstances, set the standard of price, it is wise to choose the one subject to the least fluctuation for the universal standard. The bimetalist holds that a nation, or at any rate a group of nations, can fix by agreement the price of gold and silver in terms of each other, when used as money. Since the use of these metals as money makes the chief demand for them, it is thought possible to make this legal ratio hold upon the total product of

both gold and silver. If, then, in any country the supply of gold should be out of due proportion with silver, its overvaluation will at once attract gold from other countries until it becomes no more profitable there than elsewhere. The result is assumed to be a somewhat ready equalization of values for the territory establishing the standard, so that the actual fluctuations of the standard unit will follow the line of lowest prices for either of the metals. The monometalist feels certain that the actual withdrawal from circulation, and so from use as money, of the higher priced metal causes greater hardship and probably greater fluctuations in values of other commodities than any fluctuation of a single standard can produce.

It is very certain that the commercial world recognizes the tendency toward a single standard, and that the coinage systems of all civilized countries are practically, if not in definite form, based upon a single standard. The countries of wide commerce and extensive credit are using the gold standard. The less developed countries adhere to the silver standard. Many which nominally sustain both have, by some legal restriction in the coinage of silver, become practical supporters of the gold standard. Few, if any, thorough students of the subject believe it possible by statute in the present conditions of mining and commerce to bring the commercial world anywhere back to the ratio of sixteen to one, established in the United States in 1834. Statute law might declare a sheep to be equal to a horse, but no power on earth could make it pull as much. So even agreement among nations, by

legal enactments, cannot enforce an unnatural relation between two products.

NATIONAL STANDARDS OF VALUE, 1899

Gold	*Gold, with silver limited*	*Gold or silver*	*Silver*
Great Britain,	United States,	Haiti,	Mexico,
Germany,	France,	Uruguay,	Central America,
Sweden,	Belgium,	Argentine Republic,	Colombia,
Norway,	Italy,	Venezuela,	Bolivia,
Denmark,	Switzerland,	Spain,	Peru,
Austro-Hungary,	Greece,	Servia,	Equador,
Roumania,	India.	Bulgaria,	China,
Turkey,		Netherlands,	Hong Kong and Straits,
Portugal,		Algeria,	Cochin China.
Brazil,		Tunis,	
Canada,		Japan,	
Newfoundland,		Java, etc.,	
Egypt,		Philippine Islands,	
Russia,		Hawaii.	
Chile.			

Actual bimetalism. — It is necessary to caution against supposing that the use of both gold and silver as currency in any country implies true bimetalism, nor is it at all certain that the making of either gold or silver legal tender at option touches the question of bimetalism. Only the issue by free coinage at the will of the owner of both metals shows a distinct attempt to maintain bimetalism. The actual maintenance of both standards has always been, and always will be, by alternation, when the ratio of the two metals as to value is established at very nearly the market value of the two metals in bullion.

Popular demand for a return to the old ratio in the United States is founded in part upon misconception of commercial principles and largely upon a misunderstanding of current events during a financial crisis. The supposed dangers from a single standard of value are largely exaggerated from confusion of standards with currency in exchange. It is quite conceivable that gold may still serve as a standard unit of value, while 90 per cent of exchanges have no other use for gold beyond its furnishing terms of comparison. We must measure value by value, and the unit of value must be true to its name, just as we measure length by something long. But the number of yardsticks in actual use in a store may have no constant ratio to the number of yards of cloth sold by that measure. The folding of calico in yard folds relieves the yardstick, but does not change the nature of the yard. So gold, or silver, is relieved of many functions in exchange through banking systems without materially affecting its use as a standard unit.

The multiple standard.—It is proper to mention in connection with units of value a theoretical device for overcoming the necessary fluctuation in all articles of value. This is sometimes called the multiple standard. The plan, in brief, is to appoint a committee of experts, whose record of current prices, in some general market, for a hundred or more staple articles of commerce, shall be compared from week to week, or day to day, in such a way as to indicate how far above or below the average the price of any article may be. If, then, gold is made a legal tender, a comparison of its price with the average

of all prices will show how much weight of gold must be given on any day to actually return a value exactly equivalent to what was borrowed sixty days or a year previous, when the ratio of gold to average prices was different. In this way it is supposed that natural fluctuations in gold, silver or any other commodity made legal tender for debt can be fully provided for without loss to either debtor or creditor.

The objections to this ideal standard are the practical difficulty of settling, first, the wide range of commodities to serve as the basis; second, the importance to be given each in adjusting the standard; and third, the nature of the commission under which the work should be done. In the history of the world, custom has preceded law in devising for welfare; in this, law without experience will have to precede custom. The difficulty which most men would experience in understanding and trusting such a system puts off indefinitely the possibility of a general adoption.

The currency.—The last essential in perfect freedom of exchange is a satisfactory means of transferring completely and quickly all property right in any article of trade. Exchange of commodity for commodity or service for service is possible to a very limited extent, since the man who wants my horse may have nothing which I want in return, or if he has, the values may be unequal, and one or the other must remain in debt, which means that one of the articles belongs in part to both. In some new countries exchanges are confined to this slow and uncertain method of barter, where nobody can buy until he finds a neighbor wanting just what he himself

has to sell. Traders in such countries contrive to accumulate a variety of things needed by all sorts of people, that they may be ready with some kind of exchange to meet particular wants. No community, however, begins to reap the clear advantages of exchange until some universally acceptable medium of exchange is discovered and accepted. The process of developing this medium is essentially the same as that described in establishing a standard of value; and so the word money naturally represents both the standard of value and the common currency of trade. It is easy, however, to see by further examination that the two functions of money are quite easily separable, and that, while it is difficult to substitute for the standard of value, a variety of substitutes can serve as currency.

In speaking of coinage hitherto, the standard of value has been assumed to be the most important, but in fact a large proportion of our coin serves simply as currency without materially affecting the standard of value. This is true of all the fractional coins, which are purposely over-valued, and equally true of the silver dollar under existing circumstances. In fact, the primary use of coin was simply for the purpose of transferring property. In the words of Aristotle, 350 B. C., "Men invented among themselves, by way of exchange, something which they should mutually give and take, and which, being really valuable in itself, might easily be passed from hand to hand for purposes of daily life." This coined money supplies the needed means of exchange most readily because it carries its value with it. In all civilized communities, and in many only partially

civilized, it is readily exchangeable for any article of commerce. It is also valued in proportion to its weight, so that any bulk in gold or in silver may be easily divided by exchange for smaller coins. With a little painstaking the coins are made identical in value, so that every trader knows what he gives and receives. They are exceedingly durable, resisting almost all the forces of nature with little loss. For this reason they are likely to have an almost universal value, that is to be wanted by everybody, in any place, at any time, and under any circumstances. These facts are proved by the tendency to hoard such coins whenever individuals have a surplus of wealth beyond present wants, or whenever there is risk in using wealth as capital because of distrust of government, of individuals or of future enterprise. A buried treasure is almost sure to be in the form of coins.

Under a system of coinage, inequalities in exchange are easily adjusted, like "the boot" in a horse trade, or the balance between produce carried to the store and the articles carried away. Most of all, coin is used where for any reason there is distrust of the future. Coin, or its equivalent in bullion, is needed in all transactions where credit is wanting. This appears prominent in all lawless communities with a fluctuating population, and may be found in ignorant communities where methods of credit are not established. It is often essential in the settlement of claims between hostile countries, and is the final means of adjusting balances in all foreign trade. Occasionally this need appears in a universal panic, where each man takes his fellow by the throat, saying, "Pay me that thou owest."

Coin a part of a country's capital.—The coined money of a country thus becomes wealth in store for constant use as a machine of exchange. Its operation is effective when it keeps in constant motion, being itself consumed very slowly in the wear and tear of motion. It is sometimes compared to an endless screw, transmitting motion to everything else with which it comes in contact. Like other machines, it may be either too abundant or too scarce for the best advantage of the country. In either case there is waste. When the coin is idle it is unproductive, but suffers less waste from deterioration than almost any other kind of machine. In case of scarcity the cost of its use is increased under the general law of supply and demand, exactly as the cost of other machinery in use is advanced when many desire to use it. This machine is a prominent part of the capital of a country, greater in some countries than in others. In France the value of coin is estimated to be 3 per cent of the value of all real estate, including buildings. The use of such a machine makes a material part of the annual cost of exchanges. The coin of England, where interest is comparatively low, costs for its use in interest, wear and tear, and recoinage more than $20,000,000 annually.

An additional cost to individuals is in the extra risk of carrying such wealth, as shown in express charges and special insurance, and still greater expense for safe keeping, and a considerable use of time in counting. These facts have led to many devices for lessening the need of keeping wealth in this form.

Credit by accounts.—The most obvious method of

avoiding the use of coin in exchanges is a current account between individuals having many transactions in trade. A farmer carries his butter, eggs, fruits, grains and live stock, perhaps, to a single dealer in all these articles, and takes in return articles of household use or for any necessity as he requires them, from a spool of thread to a harvester. If both keep accurate accounts, a settlement once in six months satisfies most conveniently all the requirements of perfect trade. Indeed the settlement is needed only that the accounts may be verified. Except for the dangers of waste in unlimited credit and carelessness in expenditure where future wealth is drawn upon, this method of exchange is simple and inexpensive. In the nature of the case, however, it must be limited, for safety, to trade between people having confidence in each other's honesty of purpose and ability to keep correct accounts. It also requires a mutual expectation of ability on the part of either to meet indebtedness at any future time of settlement.

Credit by due-bills.—An extension of this credit in well established countries, so as to take in other persons than the two involved in book account, is found in due-bills, notes of hand payable on demand, or more formal securities, any of which may require a final decision in court. These pass from hand to hand, often in connection with coin, and under ordinary circumstances serve their purpose cheaply. In some countries a note of hand, with endorsement of each user, may make exchanges until it is covered with endorsements. The danger of waste is considerable from the impossibility of

knowing the financial standing and honesty of the various endorsers, and the system is limited, of course, to the range of confidence in such trustworthiness. So easy is it to extend this credit of individuals beyond the range of safety that most governments have found it necessary to protect their citizens against its dangers by limiting or prohibiting its use as currency.

Credit currency.— So convenient, however, and so economical is the use of credit, that all well established nations have developed systems for the issue of a credit currency founded upon the stability of strong corporations or upon the national credit. Nations themselves have often issued bills of credit in the form of notes, or promises to pay at the national treasury. If these are payable on demand in the coin of the realm, they are said to be redeemable. If the time of payment is uncertain, or indefinitely postponed, they are said to be irredeemable. Thus we have the many forms of paper money so familiar to everybody and the various practices and speculative theories regarding it, which make a large part of the discussion of financial questions throughout the world.

No one doubts the worthlessness of currency in any form of note, from individual or firm, which cannot be paid when presented. The notes of the government, so long as that government is considered stable, may circulate readily, and even after doubts exist as to the final ability of the government to redeem, they still circulate, perhaps with greater readiness, in the feeling that hoarding is utter loss and the stopping of trade in the ordinary perishable products of industry will be an enor-

mous disaster. This feeling often leads to the use of a currency without value, like the token money used for change in the absence of legal coins. Though nobody is bound to redeem these tokens, everybody takes the risk of loss as less disastrous than no exchange. Paper money issued by corporations is universally considered dangerous to the interests of communities, unless very carefully restricted within distinct and clearly understood limits. The discussion of such issues will be given in another chapter devoted to banking. The issue of paper money by governments has been a frequent device for enforcing contributions of citizens to extraordinary expenses in war or other disaster. A history of such issues cannot be given within the limits of this book, but is well worth the study of those who seek an understanding of the powers and limitations of government under natural laws, in making a satisfactory currency. A government's stamp upon the piece of paper is so far good, and only so far, as it secures to the receiver of the paper an equivalent value to what he gave for it. If the government itself is unable to give that value, it can never insure the ability or the willingness on the part of any individual to give such value. While millions of dollars in such form may serve as currency without any deterioration, as at the present time, when government promises in all the various forms amount to nearly $1,000,000,000, should any of these, on any day, be refused payment for want of means in government possession, every individual in the land would feel that the value of his possessions in the shape of such notes was made just so far doubtful as the

chances of redemption are postponed. All issues of such notes at once become certificates of debt rather than credit, and lose, to greater or less extent, their exchangeable value.

In the extraordinary issue of "greenbacks" during the civil war, the purchasing power of a paper dollar was reduced to less than half, and gradually appreciated in value as the expectation of early redemption increased. The effect of such issues upon government revenues will be treated in its proper connection. As currency, it certainly robs each creditor and holder while depreciating, and as surely robs each debtor while appreciating. As wage earners are universally creditors, according to prevailing customs, they suffer most in a depreciation of money values: i. e., they work for dollars at one value and a week or a month later receive them to expend at a less value. Speculative debtors, on the other hand, always thrive on depreciating currency, paying their debts in what costs less exertion. Under appreciating currency, the creditors gain, be they bankers or workmen.

Banking.—The peculiar convenience for saving found by experience in the use of each of these methods of settlement in exchange leads to a natural commingling of all. Coins serve some purposes best, and accounts have a limited range; notes of hand are often desirable, and paper money, if safe, is universally convenient. This natural combination has led to a more systematic arrangement for handling various kinds of currency, called banking. The most obvious addition to the machinery of exchange in the system of banking is the possibility of immediate transfer of property right

in a bank deposit by check and account, or by a draft in account between banks, or by bills of exchange in more distant transactions. The bank deposit is made up of individual wealth, or titles to wealth, supposed to be immediately available for use in exchange. It may consist of all the kinds of currency described or conceivable. Checks are orders upon these individual accounts or deposits, and by their means exchanges are made with great ease and little risk between individuals in the same neighborhood or even in distant cities or distant countries. The cost of storing, handling or transferring any form of currency is reduced to a minimum. So far-reaching is this comparatively modern machine of exchange that it is properly assumed to be the means of settling 90 per cent of all exchanges, domestic and foreign, with almost no use of money in any of its numerous forms. Its importance as a machine of commerce entitles banking to a more distinct consideration, and chapter XI will be devoted to the subject.

Deferred settlement.—In certain stages of civilization exchanges involve, not simply present wealth, but prospective accumulation. A farmer may purchase his farm upon the assurance of crops and stock to be raised in a series of years. In this exchange final settlement is deferred by notes payable at definite future dates, the promise to pay being secured by a deed in trust, a mortgage deed or individual endorsement. If many individuals are united, a purchase may be made by means of issuing more formal notes called bonds, the property of the company being pledged for the payment of the bonds when due. Sometimes such purchases are

made by the issue of stock, establishing the right of the seller to a certain undivided share in the wealth controlled by the company. In this case the time of final settlement is indefinitely postponed, to be fixed by limits of the charter or by a vote of the stock-holders. All these certificates of indebtedness serve to a limited extent in exchange of property. So far as they enter into commerce, after the first transaction, they are simply articles of purchase and sale, having a more or less established market value. Since they usually represent an accumulating interest or a provisional dividend, the market value is constantly fluctuating, and they can therefore serve almost no purpose of currency.

The ease with which such notes, bonds and stock can be made the basis of a single purchase in establishing some enterprise gives to them an indefinite influence in trade, sometimes immensely extending the apparent purchasing power of a community. The advantages and disadvantages of such deferred settlement are so varied and important as to make it worth while to treat the subject more extensively than is proper in this analysis, and such treatment will be found in Chapter XII.

CHAPTER XI

BANKS AND BANKING

Origin of banks.—Attention has been called to the banks of the country as a most important part of the machinery of exchange. It is proper to describe more fully the nature of the machine and its operations. A clear understanding of the character and process of banking on the part of all the people both extends its influence and diminishes its dangers. Banking, like everything else in civilization, has had a natural growth. The different steps in its growth have been devised for the sake of meeting the needs of a growing commerce, and banking can exist only where commercial transactions are frequent and constant.

The word bank, distinctly related to the English word bench, is supposed to have been adopted from the fact that early Jewish dealers in money sat by a bench in the streets of Italian cities. The commercial city of Venice is supposed to have been the seat of the first organization distinctly named a bank. This was a corporation of money lenders who handled their capital in the form of coin by exchanging it for notes of individuals. This was as early as the twelfth century. Since that time in every civilized community there has been experiment upon methods for quickening exchanges

through such organizations, some of which have been of great advantage and some have brought disaster. The modern system of banking is the result of all these centuries of experience, a history of which cannot be given here.

Bank described.—A brief description of the most modern form of banks under state or national restrictions will help to understand how these institutions serve the world of commerce.

In simplest terms, a bank is a company founded for the sole purpose of dealing in coin and current certificates of credit of every form, the prime object being the convenience of people in making exchanges of any kind. Sometimes a bank is called upon simply to make change, or, as we say, to break a valuable coin or a bill of large denomination into smaller pieces. On the border land between two countries the banker serves a traveler by exchanging the coins of the country he leaves for coins of the country he enters.

Often the bank, equipped with safe protection against fire or robbers, receives the wealth of others in any form of money for safe keeping, with provision for its being paid when it is needed, whenever and wherever the owner directs. The same bank may be asked to exchange the money in its possession for notes of individuals payable on demand or at definite future time. It may even issue notes of the firm in place of the individual notes received, acquaintance of a community with the standing of the bank as a dealer in money making its notes circulate where individual notes would not. In this case the wider credit of the

bank is exchanged for the limited credit of individuals. In the end a well established bank in close association with a system of banks is expected to do any service that has to do with either money or credit, so long as the credit approximates cash transactions, and has not drifted into overdue debts requiring courts and officials for collection.

So important are all these functions of a bank to the interests of society that distinct provision is needed in the law of the land for establishing the bank and maintaining its efficiency. The double system of government in our country known as state and national leads to two classes of banks, called state or national according as they are organized under authority of state government or under national laws.

State banks.—The independent laws of any state are supposed to provide such restrictions as the people desire for the management of banks. Any bank chartered by the state government is subject simply to the laws of the state pertaining to banks and is called a state bank, whatever the name under which it does business.

The laws of the different states vary indefinitely, but the essentials of a banking law quite recently established in one of the states may serve to illustrate the modern ideals as to safe, legitimate banking. Under this law a bank must be a corporation of not less than five persons who have subscribed for the entire stock and have paid at least 50 per cent of the value of this stock before beginning business, with provision for payment of 10 per cent each month until the whole of the capital

stock is paid for in cash. Each stock-holder is individually liable to an amount equal to the value of his stock for any debts of the bank in excess of its original stock. Having settled upon a name distinct from all others, its application is made to a bank commissioner for a charter to do business in banking according to the laws of the state. Under the charter issued by the commissioner, the bank is required to be managed by a board of directors, from five to thirteen in number, which board elects the needed officers and appoints the necessary clerks. It cannot increase its capital except by fully paid stock, and can do no other kind of business, like buying and selling of goods and lands, or managing factories and railroads. It is authorized to receive deposits and make loans at interest not above legal rate, provided it keeps on hand available funds, including bank balances, amounting to 20 per cent of its total deposits, and never loans to one individual or firm more than 15 per cent of the paid up capital of the bank. A penalty of fine and imprisonment follows conviction of any officer for receiving deposits after general insolvency is known.

Each bank is required to report to the commissioner at least quarterly, and whenever called upon to publish its report; while failure to comply with requirements of the commissioner in report or otherwise brings immediate forfeiture of the charter. The commissioner or his deputy must visit each bank at least once a year and whenever occasion may require. If, upon examination, a bank is found insolvent the commissioner himself takes charge of the business for

final settlement of its affairs. These important restrictions and careful inspection are thought necessary to secure the public interests in banking. The state through its bank commissioner gives guaranty to the public of legitimate and safe banking. The value of that guaranty, of course, depends upon the honesty, experience and executive ability of the bank commissioner, whose term of office and compensation should make him as independent as possible of any weakening influence. Under present arrangements no state banks issue their notes as currency because of a national tax of 10 per cent, which prevents a possible profit from its issue. Present state laws, therefore, make no provision for that function, unless by statutes existing before the organization of national banks. The states still have the constitutional right, apparently, to charter banks of issue, but the advantages of uniformity throughout the nation are so evident as to make such action very improbable.

National banks.—The so-called national banks organized under authority of United States government have been in existence since 1863, and have proved, so far as currency is concerned, such an improvement upon anything preceding in the way of bank issues, that few have advocated any return to former methods. The system as now existing places the authority of the United States in an officer called the comptroller of the currency. The law requires an association of five or more persons with a definite name and location, having not less than $100,000 capital ($50,000 in small towns) all paid within six months of beginning business. Share-holders are

individually responsible for debts of the bank, aside from their stock, to an amount equal to their stock.

In banks having over $5,000,000 capital a surplus of 20 per cent may take the place of this individual responsibility . Not less than one-fourth of the capital stock, usually one-third, is deposited in the United States Treasury in the form of registered bonds of the United States, to be held exclusively for security of circulating notes. These notes are issued to the bank by the comptroller to the amount of not more than 90 per cent of the market value of the bonds deposited. These notes, printed by the government, signed, registered and sealed in the United States Treasury, in denominations from five dollars to one thousand dollars, become money when signed by the officers of the bank whose name they bear. The cost of these notes, together with the cost of restoring when worn out, as well as the expenses of the comptroller's office, are met by a tax of 1 per cent per annum, paid semi-annually, upon the average amount of notes in circulation during the previous six months. Such notes are not a legal tender, but are received at par for all dues to the United States except duties on imports, and for all demands against the United States except interest on the public debt and in redemption of currency. Any other issue of notes is prohibited, and worn out notes are cancelled and burned in the Treasury of the United States, being replaced by new.

The banks in sixteen principal cities are required to hold a reserve equal to 25 per cent of their circulating notes in lawful money of the United States, namely coin or treasury notes, and all other banks must have a re-

serve equal to 15 per cent of their circulating notes in the same form. This reserve is held for the redemption of the notes, provision being made for such redemption at the Sub-treasury of the United States in New York city, bank balances and clearing house certificates in the larger cities being counted as part of the reserve. The object of this is to secure ready redemption of any note in all parts of the nation.

The comptroller's office includes expert examiners, and to it each bank must report at least five times a year, with other special reports as called for. Each bank is subject to examination at the pleasure of the comptroller, and in case of failure to redeem bills or comply with the law, the comptroller has power to take possession of the bank and close its business. The usual banking business of any national bank proceeds according to the laws of the state in which it exists, the legal rate of interest of the state being compulsory.

Advantages and disadvantages of national bank currency.— The advantage of such a uniform system of bank notes is evident. The bills are secure beyond the possibility of doubt as to their final redemption, and therefore circulate freely without reference to the failure of the bank issuing them. In case of failure, all the banks form a ready machinery for collecting the bills for final redemption at the United States treasury. The frequent reports and expert inspection give as satisfactory means of maintaining safe management as can be secured by law. The possibility of connivance between examiners and bank officers is reduced to a minimum.

At the same time, there are disadvantages from several sources. First, United States bonds do not form a permanent basis. Second, the market value of these bonds and the low rate of interest make the use of capital in the shape of circulating notes less profitable than other capital in the bank. This is especially true in the newer communities where interest is high, and banks so located are likely to surrender their circulating notes at times when money loaning is most profitable, and thus cause a fluctuating volume of currency in the country. Third, the national banks are easily made objects of suspicion as to matters of legislation with reference to money.

Government banks.—Similar institutions under direct management of government officers have often been thought of as bringing the banking machinery within the direct judgment of the people, and so best meeting the wants of the community as a whole. The advantages of unity and publicity in such a system seem evident, and yet in actual practice the safeguards against misuse of power have proved on trial less satisfactory in such methods than in several others. The history of debased coinage already referred to shows that men in power may easily disregard the interests of the people, and under popular government both officers and legal restraints are subject to changes in the interest of localities and parties. It is possible that a stable body of experts might manage such an institution under laws as stable as the Constitution with success. But the restraints of law are most effective upon institutions outside official circles.

A government bank is subject to extreme pressure from popular demand under any financial distress to issue currency for general improvements in public buildings, parks, etc., which can bring no return and afford no means of redemption. Even the demand of unfortunate debtors for extended loans may push the bank into excessive issues, and finally lead to the scaling of debts and currency together in an effort to escape the results of over-issue.

Bank business.—Whatever the organization of a bank, its business must be essentially the same. It receives deposits from its customers for safe keeping and for convenience in use by means of checks. A check is simply an order to pay, and, if the receiver is a customer of the bank, amounts to merely a transfer of deposits from one owner to another on the books of the bank. A thousand dollars safely kept in the bank vault may thus change owners a hundred times by means of checks properly recorded. In large transactions the check, because of its economy, takes place of any other form of currency. The bank must also deal in drafts, by which exchanges can be made in different cities, and in bills of exchange, distinguished from ordinary drafts by special reference to foreign trade. It may also hold, as a part of its available machinery, clearing house certificates, which are statements of balances due in the daily settlement between the banks belonging to a clearing house association.

All these form a part of the machinery of every-day exchange, and together with a complete system of bookkeeping make the utmost facility in the use of money.

They also greatly economize in the use of money by saving cost of counting and of transfer, and by securing against losses. If the system offered no more advantages than this safe and ready use of good money, the banks would be practically indispensable. But they have a still greater use in a safe extension of credit. The perfection of system in banking makes it possible for one who habitually fulfils his promises to purchase anywhere in the world on the shortest notice with the simple guaranty of credit in the bank where he does business. A traveler wishing to have funds in safe-keeping, and yet available on a journey around the world, may obtain through a bank familiar with his business standing a letter of credit, upon which he can draw, wherever he may be, against the deposit in his favor, and his draft will be paid, through a series of banks, at the bank near his business connections. Thus the credit of the world is bound together by the banking system grown up to meet the necessities of trade.

The clearing house.—All forms of credit referred to above, where dealers are customers of a single bank, are easily brought together upon the books of that bank, and will practically cancel each other. The customers of many banks in large cities may have their checks and drafts brought into a single system of book-keeping through a clearing house, which is simply a bank of banks. At a certain hour each day, in the larger cities twice a day, each bank of the city brings to the clearing house all checks and drafts against any other banks. These are quickly sorted, charged to the several banks against which they are drawn, and credited to the banks

from which they are brought. The balance of debit and credit is settled then and there, either by transfer of cash, or by issue of a clearing house certificate that a bank has a balance in its favor, and so only a small amount of cash is used in settling all transactions of an immense business. The clearings of a single day reach hundreds of millions of dollars, and form an index of the business prosperity of the country.

The system saves the risk and cost of transferring back and forth immense amounts of coin and currency, and brings the business men of the country into ready contact with each other. It is an essential part of the means of settlement between different cities and different countries. A debt in any part of the world can be paid through a draft on London, which by means of the clearing house and its associated banks can be purchased anywhere and paid without delay. Since the purchasing power of any part of the world is chiefly in what it has to sell, the constant motion of checks and drafts in opposite directions will balance each other. If there were no long time credits, the purchases of any city would essentialy equal its sales; and so with perfect clearance all trade would be quickly adjusted with but little use of money except for retail business.

Other clearing systems.—So evident are the advantages of clearing houses in banking that the system extends to many other interests. Railroad corporations balance accounts against each other by exchange of tickets issued by the different roads. Large combinations of dealers in implements or other goods find a similar service available where they can work together

with confidence. Express companies sharing in a common service divide the final proceeds upon the same principle. So evident is the advantage that the growth has been rapid during recent years, and seems likely to extend still further.

Some effort has been made to establish farmers' exchanges upon a similar plan, but as yet with little success. The obstacles are chiefly in the want of business confidence in business habits among the farmers themselves. Since the system is strictly a credit system, exact promptness in meeting engagements and constant dealing in the same channels are absolutely necessary. Most farmers, having comparatively few transactions from day to day, are loth to attach themselves as constant customers in any association. With larger experience and more neighborly contact they are finding it possible to work in association for various purposes, and will doubtless enlarge their means of business credit as their progress in mutual understanding increases.

Government inspection.—The principal support of universal credit through banking is the assurance that uniform methods, honest in principle and accurate in execution, are followed. To secure these results a system of government inspection and guaranty seems absolutely necessary. If the public faith is to be maintained, the ground of that faith must be publicly established. The more complete the examination by trusted officials and the more frequent the publication of official reports, the better the public credit. It seems possible that even individual trustworthiness may become a matter of government record as it is now of private consideration in

all business circles. One chief guaranty of credit through the banks is the strict inquiry made by the banks themselves into the business standing of their customers. If the record were perfect, the chief weakness of the credit system would be largely removed.

The balance of trade.—The bulk of trade between countries, that is of dealers in different countries, is settled in the usual routine of banking as has been indicated; but since under present systems the standards of value are given in different terms in different countries, somewhat more of friction remains in such trade. A greater attention is given to the fact of final settlement in coin or bullion. The price of exchange from a country whose dealers owe more than is due them, under the law of supply and demand, soon arises to an amount sufficient to cover the cost of transporting gold or silver. When these metals are used in payment by transportation from one country to another they are said to indicate the balance of trade; that is, they show that more of other property comes into the country than goes out. This balance of trade is supposed to show the relative prosperity of a nation, and is said to be against it when the nation buys more than it sells.

It is usually sought in the difference between the value of coin or bullion exported and of that imported. In two sets of circumstances a large correction is necessary to show the actual condition of trade. One is where a nation is buying on long credit, as in case of great enterprises like railroads or factories, constructed by sale of bonds in foreign countries or by sale of any other securities, government or individual, in a foreign land. The

other is where a country like our own is a large producer of gold and silver by mining. In this case the products of the mines are as proper an article of export as the products of the farms or of the factories, and should be estimated as a part of the natural exports. For these reasons the balance of trade must be carefully scrutinized before being accepted as proof of a nation's progress in poverty or wealth.

Bank loans.— So far, in dealing with the subject of banking, no mention has been made of the function of extending individual credit by time loans. One of the original purposes of banking was to make a convenient office for the meeting of borrowers and lenders. The banks are still the go-betweens of those who have money to lend and those who have to borrow. In fact, every banking association is assumed to be a corporation of money lenders. Under ordinary circumstances this corporation is able to loan to individuals whose credit is good all of its capital not otherwise employed in the machinery of the bank, a considerable portion of deposits from its customers, and to a certain extent its own credit in the commercial world. In the case of a national bank a portion of capital is loaned to the government in the purchase of bonds, which are the basis of its circulating notes. The circulating notes, from 60 per cent to 90 per cent of the value of the bonds, are an extension of credit; that is, the capital already loaned on time to the government is partially loaned again to individuals. Again, the deposits of the customers, to be drawn as needed, in ordinary circumstances are not needed the same day. The bank soon learns by experience what portion it is

safe to lend from day to day to individuals who are sure to make payments when promised. Double signatures, or endorsements, double the surety of prompt payment.

Thus the banks are enabled to provide safe keeping for money without charge, and even to pay a low rate of interest upon considerable deposits when times are good. In this way legitimate borrowers and legitimate lenders find a close connection in the bank. A legitimate lender is one who has property not needed at present for his own use. A legitimate borrower is one who can use capital to advantage in production. Any producer may at one part of a year be a lender and afterward a borrower to advantage of everybody. If the banks are thoroughly satisfactory the proceeds of the fall crops may serve the busy manufacturers as circulating capital during the winter. Again, the proceeds of the spring sales of goods and machinery may tide the farmers over the season of growth.

In this way labor of every kind is sustained by labor of every other kind. In all these ways the banking power of a country is extended to several times the coin money in circulation, and that with perfect safety. But it is possible for banks to be tempted through the very perfection of their own credit. The note of an individual has no established market value. A deposit in the bank is valued as cash. It is possible to secure the credit of having a bank deposit by discounting an individual note. If that note is a time note the bank has increased its immediate liabilities by the amount of a nominal deposit, with only a promise to pay in the future to rest upon. To lend to an individual is prac-

tically to enter into partnership with his fortune. The fortunes of the group of individuals representing the bank is less doubtful than that of any one person. The borrower in this instance pays in the discount of his note the difference in risk between his fortune and that of the combination. Such deposits purchased upon credit must be distinguished from deposits of cash, lest the bank should nominally increase its power to lend while in fact it has already lent up to its ability. Sometimes such nominal deposits are maintained by persons deeply in debt for the sake of paying a larger rate of interest than is allowed by law.

Safety of banking.—In times of business prosperity a bank with usual business caution as to customers, is safe for all concerned. And yet, in the very nature of extended credit, it has promised to pay on any particular day, if demanded, far more than it has cash in hand. Its liabilities embrace the whole of its deposits except a small portion made for a definite time, and all its issues of currency subject to redemption. To meet these engagements its immediate resources are whatever currency in any form of coin or bills it may have at hand. This amount, since its profits are made from lending, not from holding, must be small in proportion to its liabilities. The bulk of its means of payment is in notes not yet due, and to be collected when due. Of other property it is likely to have bonds of municipalities or of great corporations, and these are supposed to be a more available form of resources than individual notes, because they usually have a definite market value and can be sold or used as security for loans in any

money market. If real estate forms a part of the capital, it can never be made available for immediate use. Hence any bank dealing in mortgages on real estate invests its funds where they cannot be had when wanted. All banking schemes based upon security in land have necessarily failed, because land has no current use in trade.

Under the pressure of panic, from whatever source, each depositor is sure to demand every cent due him from the bank, and just as certainly the bank's own resources are insufficient to meet those dues without the sale of bonds and notes in other markets. For these reasons in any great period of distrust the banks are obliged to suspend payments. Since all the banks of the community are in similar circumstances they cannot help each other, and time must be given for the collection of loans, according to agreement, that the gradual accumulation of ready cash may return to the vault, and so to the depositors, all that has been loaned. Because of this necessary instability bankers watch most carefully the tendencies of the money market, and necessarily reduce their loans for safety when any anxious pressure begins. For the same reason legitimate banking is limited to short time loans—on demand, thirty, sixty, ninety days—the shorter being the safer. Laws sometimes prohibit a bank from dealing in any other business, where a stock of goods must tie up funds, or from speculation in real estate, which confines capital more certainly.

In most banks the amount to be loaned to a single individual or firm is limited to a small portion, one-

tenth to one-fifth, of the total capital. The principal causes of failure in banking are defalcation of officers, misuse of funds in speculative enterprises, dealing in speculative securities or on boards of trade, careless loaning to poor paymasters, investment in long time securities not readily marketable, or sacrifice in hurried sale of stocks and bonds under the pressure of panic.

The better the customers of a bank understand its condition and management, the less is its danger, for the basis of banking, as of the credit of the world, is the public confidence. Farmers who acquaint themselves with the workings of neighboring banks by making use of their aid in business benefit both themselves and their neighbors. The progress of the world demands of every farmer a closer contact with business and, therefore, a greater familiarity with business methods. Even the burden of debts will be lessened when farmers understand and appreciate the advantage of systematic credit. The dangers from over expansion of credit are lessened when all the people clearly understand the essential conditions for maintaining credit. The final perfection of a banking system depends upon the interest of the whole people, with a fair knowledge of the growth already made.

CHAPTER XII

DEFERRED SETTLEMENT AND CREDIT EXPANSION

THE general bearing of settlement in trade, deferred by promises to pay in the distant future, has been several times referred to in preceding chapters; but its bearing upon the general welfare is so marked in many ways as to deserve more particular treatment. The special form by which one man becomes a purchaser on the strength of future abilities may have little importance in the total result, but some peculiarities of the different forms are worthy of mention.

A *standing account* without definite period of settlement easily becomes a temptation to waste, as well as a source of worry, when the account is extended. A friend remarks, "You never seem so well off as when you don't expect to pay for what you buy, although the reason may be that you can't pay for it." The fact that the day of settlement may be indefinitely postponed makes the temptation to overestimate the chances of future ability. An account almost certainly insures the purchase of ordinary supplies without asking the price, and only frequent and complete settlement makes safe for ordinary people the expenditure of income through store accounts.

Promissory notes due at a definite time have less

effect upon the imagination; yet payment a year hence seems always easier than payment now. Only repeated bitter experiences teach one to say, as I once heard an old gentleman, when offered a horse to replace his dead one without limit as to the time of payment, "That sounds very well, my friend, but it is a mighty hard way at the latter end." Every farmer familiar with country auctions, with a year's credit upon purchases, sees the effect of such postponements in magnifying the value of articles purchased.

A note secured by *chattel mortgage* in the nature of the security is less extended and has the distinct hardship of future payment presented in the possible loss of the chattel offered as security. The chattel mortgage, therefore, becomes a favorite method for short time delays in payment, not only because the security is good, but because the full attention of the maker is given to the necessity of payment.

A most familiar form of deferred payment for farm property is the *mortgage note*, secured by a deed entitling the holder to take possession of the farm, or real estate of any kind, upon failure of the maker of the note to meet its conditions. This is esteemed the best possible security for payments long deferred, because the ordinary values of real estate in a growing country like ours increase rather than diminish. Except in cases of overvaluation from speculative investment, or in the settlement of a new country under misconception of its conditions, the security remains ample. And even then the lender has no greater risk than the borrower. Since final settlement by foreclosure of mort-

gage involves the law's delay, increased by the natural sentiment growing up about a home which has been occupied for years, such mortgage notes are only to a limited extent available in general commerce. In large measure they are likely to stand between the original purchaser and seller. The exception to this is found in investment of large trust funds, as with insurance companies and endowments of colleges and other benevolent institutions. In these cases a permanent investment, with stated income, is desirable, and mortgage notes with five to ten years' credit give better rates of income than long time bonds of great corporations or governments. The ease with which purchase is made by a mortgage tempts many a young man to promise more than he can fulfil. The weight of the farm mortgage is felt throughout the country, doubling the disaster of every deficient crop. Variations from the mortgage in deeds of trust and instalment contracts have essentially the same relation to credit, involve essentially the same burdens, and differ only in the legal forms for taking possession of the real estate in default of payment.

Where a company or a community defers payment for its purchases, it is said to issue *bonds*, which are simply formal notes, usually with attached notes, or coupons, for interest at stated times, issued by qualified officers under specific legislation. These are so easily understood and tested for their quality as to become a part of the general credit of the country. They gain a well understood market value, and pass from hand to hand with greatest readiness. This fact adds to the ease with which they may be issued, while the extended

time, from ten to thirty years, increases both the convenience of possession and the readiness to issue. The people of a city do not hesitate to supply themselves with magnificent waterworks at the expense of the people a generation later. Thus municipal indebtedness is easy to contract, and the hard lesson of paying for dead horses is seldom effectually learned. More insidious still is the temptation to issue the bonds of a county for the building of a railroad, whose prospective benefit in adding to the value of lands is indefinitely magnified. A community of farmers already burdened by mortgages can be tempted into additional burdens in county bonds from expectation that a new railroad will double the value of their farms. The facility with which states and nations negotiate bonds is so well understood that it scarcely needs mention. Yet the burdens of taxation so grievously felt are often self-inflicted by the people who favor unbounded indebtedness. It is rarely the case that a well-to-do school district is not better off when it meets the cost of its schoolhouse by immediate taxes rather than to postpone payment by bonds.

The organization of a *stock company* involves a peculiar system of deferred payments, in that every holder of stock becomes in a sense both debtor and creditor. He is debtor to all his associate shareholders, and is also their creditor to the extent of his share. *Stock certificates*, like bonds, may pass from hand to hand with ease, and foster the innate spirit of speculation among a commercial people. The organization of a stock company, especially of a great trust,

is made relatively easy from this fact, and in this way the general credit of a people is indefinitely extended. A prosperous corporation is likely to distribute the results of its prosperity by increased issues of stock, and the readiness with which the public accepts such issues makes natural, though vicious, the so-called *watering of stock*, familiar to all. The immediate object of watered stock in fairly managed companies is the immediate distribution among shareholders of any increased value without increased cost. As the farms along a line of railway may have doubled their value with no expenditure in improvements, so the railroad itself may have doubled its value in the possibility of earnings through the rapid development of settlements along the line. In ordinary ways this increased value will be shown in the market price of the stock, but an issue of more stock to the present holders of stock certificates will keep down the price of individual shares and yet give the benefit of the increased value to shareholders.

The stock exchange.— The last mentioned forms of indebtedness so easily become matters of everyday purchase and sale as to lead to the business of stock brokerage, found everywhere in greater or less extent. In large cities the brokers naturally unite for convenience of business in the so-called stock exchange, in which the market price of all current forms of indebtedness or deferred payments is fixed from day to day, or from hour to hour, by the higgling of the market, just as the price of produce is fixed in the produce exchange. Naturally, as in the case of produce, a fictitious business, purely speculative, grows up around the legitimate dealing

in stocks and bonds. Other forms of deferred payments enter less into the business of the brokers, because the market value of any particular mortgage or individual note cannot be easily determined outside the immediate neighborhood where it is made. The chief way in which these enter the general brokers' market is through the stock or bonds of large brokers' companies, sometimes called guaranty loan companies. In this way the universal extension of credit through deferred payments finally has its effect upon the general confidence. The broker's business grows legitimately out of the need of ready transfer of claims, for the sake of larger use of the floating capital of the country, and readiness of investment in more fixed forms. It adds, however, to the dangers of extended credit by making more easy the gratification of present wants through expectation of future ability. The broker makes his gain, without reference to the final settlement, by taking a commission upon the loan. His interest leads to an overestimate of the borrower's ability, and cases are not infrequent where appraisers of real estate have been hired by brokers to misrepresent the value of property, for the sake of securing improper loans.

Every period of expanding credit in speculative movements has furnished proofs of this tendency. A standing example is furnished in mining stocks, in which the temptation to misrepresent prospects by "salting" and false assays is proverbial. Almost as notorious are the misrepresentations associated with bonds of newly established cities or other municipalities. Not all such misrepresentation is intended fraud, but the immediate

interest of the broker clouds his judgment as to conditions of final settlement. With little to lose and everything to gain in the immediate transaction, his judgment is necessarily biased. The merely speculative buying and selling of stocks by margins has little to do with the general character of indebtedness, except to increase somewhat the risks of legitimate brokerage. The "bulls and bears" on exchange make their gains by fluctuations in market values, and, like all gamblers, delight in producing false impressions upon their opponents in the game. This fact adds to the uncertainty of all standing credit, and so increases the natural rate of interest. This effect upon interest will be noticed in considering the nature of interest and conditions affecting it.

"*Borrowed money.*"—In all the forms of deferred payment, except standing accounts, it is customary to represent the amount of the debt as "borrowed money," no matter how the transaction occurs. When a farmer buys his farm with a promise to pay five years hence, his note is said to represent so much "borrowed money," while in fact he has simply borrowed the farm. The reason is, that the farm is represented by its value in dollars, and the promise is to return that value in dollars at the end of five years.

The same is true, in fact, of all purchases on credit. Even when the purchase is made by means of a note at the bank, the actual transfer of property is from the owner of the farm to its prospective owner, the bank simply acting as agent, and interposing its credit or capital only to promote the exchange. In many instances

no money in any form is used, and where it is employed at some stage of the transaction, it is used, as in any other exchange, simply as a machine of transfer. Even the final settlement is likely to be made through the ordinary channels of trade, without the intervention of money in any of its forms. The deferred payment takes its place when the time of payment comes in the ordinary everyday transactions of the universal credit system, illustrated in banking. Even if the farm is paid for by instalments, those instalments are simply ordinary transactions in trade, the farmer transferring the check which he receives from the sale of his steers or his wheat to the former owner of the farm. The money involved is simply money of account, referring to a well understood standard of value. The importance of this standard in reference to deferred payments has already been referred to. It cannot be overestimated. But any estimate of the currency needed, or to be needed for the transaction of business, founded upon the amount of deferred payments, is wholly fallacious.

It is equally wrong to suppose that the bankers are the principal money-lenders. The real lenders are those who have sold their produce, the use of their tools or their time, at a price to be paid next week, next month or next year. Every man who has wages due him is as truly a money-lender, to the extent of the wages due, as any banker who accepts a promise to pay in the future for service or value given in the present. Even where the borrowed articles have been consumed or wasted, the promise to pay is simply a promise to return so much of value as the articles received were estimated to be

worth. This may be easily seen in thinking of a running account at the store for the ordinary supplies of the family. It may amount to five hundred dollars, if one's credit is sufficient, and seem only the actual articles used, and yet to be paid for; but if settled by a note fixing a future definite time of payment, the debt at once becomes in thought borrowed money, though no change whatever has been made in the actual facts. If the same purchases had been made by means of credit at the bank, gained by discounting a personal note, the same articles exactly would have been borrowed, the bank instead of the merchant being the lender. In all probability the bank has been the means in the first case of enabling the merchant to meet these current wants on credit, for he himself has gained the credit of the bank by discounting his own note. In either case the bank has been the means of serving both the borrower and the lender. It is simply a machine for accommodating both.

Legal tender.—All forms of deferred payments imply the possible intervention in final settlement of the force of government. While the great mass of promises to pay are met without an appeal to laws or courts, the whole is put in such form by customs of society as to involve the possibility of such arbitration. Government takes no note of debts which cannot be proved in court, and the forms of legal proof are well settled. All the formalities of credit in systems of book-keeping, forms of notes and bonds, and wording of stock certificates imply the possibility of final adjustment in a court of equity. For this reason, governments estab-

lish some form of currency as the representative of value, which must be accepted by the creditor in complete satisfaction of a debt. This is naturally what custom has established as the standard of value, but anything else may be substituted if the government so decides. Thus, Massachusetts once made bullets legal tender at a certain price, up to a certain number. Our government now makes copper cents and nickels legal tender to the value of twenty-five cents.

The current notes of the government are usually legal tender, unless otherwise stipulated, whatever their current value. This means simply that the government through its courts secures the collection of *bona fide* debts, in terms of value defined by law or by contract. The assurance of final settlement, given in this way by the government, is one principal element in extending credit on time. Without such machinery credit would be confined to intimate acquaintances and very limited time.

Expanding credit.— All the machinery of credit tends to bring the floating capital of a country within the reach of great enterprises. If a body of men have faith in some great undertaking, like a continental railroad or a Panama canal, their faith in the enterprise is easily made a basis for the faith of others. Even the small accumulations, the savings of day laborers, may be turned to account in such great enterprises if the popular expectation of success is thoroughly aroused. The greater the undertaking, the greater is the general faith under skilful leadership.

The same principle applies to undertakings of less

national character, like immense factories or combinations in a trust. The stock of such enterprises is often widely distributed, and when profits are fairly begun, even upon a small scale, the chances of gain on the value of the stock are made more prominent than the actual profits of the enterprise. It is not uncommon to find enterprises starting with the expectation that a large portion of this stock will be paid for out of the profits of the business and the profits on a portion of the stock to be sold. This is especially true when business is reviving after a period of depression. It is one of the first symptoms of the return of a speculative spirit. With the rise of such enterprises there is almost sure to be an advance in prices of real estate, though it follows later.

The starting of a railroad line involves the purchase of station sites, and almost surely the laying out of villages at intervals along the line. The promoters of the railroad are likely to be promoters of town sites as well. And this increased demand for farms and lots brings a larger faith in the future of these locations. Everyone who can save a little from his income hopes to increase that little indefinitely by investment in the chances of increased value of a lot or a home. Under such circumstances the machinery of credit moves easily, and one does not hesitate to extend his credit to the utmost for the purchase of what is increasing in value each day. The result is a temptation to larger expenditures.

People who are counting their future gains are sure to have larger wants, and their seeming prosperity in

accumulation of value gives them a larger credit among dealers. The next step is an enlargement of sales of current supplies of all sorts and an increasing manufacture of such supplies to meet the increasing wants and naturally enhancing price. Soon the staple products of farms and factories and mines become themselves objects of speculative purchase. Men buy simply to hold for the increase in price. This speculation itself is a temporary cause of success, and goes on until some accident somewhere reveals the exaggerated proportions of expectation. Sometimes this speculative spirit continues for a series of years, in which case it pervades every circle of producers and consumers. Sometimes it is temporary and local, being produced by some special undertaking and destroyed by a special failure. Sometimes the death of an enterprising man destroys the "boom" he has created. When speculation is rife over a large territory, everybody is employed to his utmost ability, and the times are said to be good. All property of every kind is counted at its highest price in the mind of the owner, and all credits are easily extended from month to month, or from year to year, because of the universal faith. There seems to the casual observer no reason for doubt, and the most conservative judges overestimate the ability of the people.

Financial crisis.— At such a time as that described, when credits of every kind are interlocked and expectations are high, the so-called floating capital of the country, under indefinite promises to pay, is gradually being actually locked up in huge plants of machinery in great

railroad routes, in vacant city lots, and uncultivated farms held for future sale, or in warehouses and elevators full of the products of industry,—especially such products as do not immediately deteriorate in quality, such as grains, cloths, raw materials of every kind and machinery of general use. This is apparently the property of the holders, but against it are the claims of all those who have contributed by loans on time, by credit for sales, by labor unpaid for and by provisions on account. One can easily see that with all these people bound together by credit a single failure may be far-reaching in its effects. The inability of a single man to meet his promises, if those promises are widely enough distributed, may bring a panic among his creditors, their creditors, and so on down to even the solid men, supposed to hold the accumulation of years untouched by speculation. For every channel of trade is full of credit, which now everybody loses.

In 1873 the promoter of the Northern Pacific railroad had borrowed everywhere, even the small savings of widows and workmen, through his intimate connection with banking. All this accumulation of savings had been expended for labor upon what was only a huge embankment, making no possible returns to any owner. The only possible means of continuing the work was continued borrowing, or the sale of additional stock. The revenue promised upon the means already used could be given only by larger borrowing. On a certain day the amount to be borrowed was less than the amount to be paid, and the failure of Jay Cooke to meet his expectations and promises was known. Within

six hours every village in the land felt the disaster. The financial crisis was seen and realized. Bargains partially completed were stopped in the midst. Materials about to be shipped were held at the station. Deposits at the bank were needed immediately, notes due at the bank could not be extended, collectors of accounts appeared at every corner, thousands of workmen directly and indirectly employed on the great railroad building were out of employment and out of wages due, the banks were unable to furnish even paper currency to their depositors, and the whole world felt absolute loss of confidence in any undertaking or any expectation.

I select this particular panic because its beginning was so comparatively simple, its progress so evident and its results so well defined. Any other failure of speculative purpose might have been equally disastrous. It could hardly have been so rapid, because it could not have been so directly distributed among the masses of the people. Yet the machinery of credit is such that any considerable failure in enterprise or speculation is felt everywhere. The banks are at once called upon for larger loans and for deposits together, an impossibility in the nature of the case. All exchangeable forms of credit are immediately offered in market at constantly decreasing prices. Current credit of every kind is checked, and exchange is limited to the barest necessities. All productive energies are practically stopped, except such as are out of the line of daily exchanges. Very soon all domestic expenses are reduced to the lowest notch, domestic help is discharged, the well-to-do undertake to help themselves, and the poor are left

without resources. It seems as if all the wheels of progress had stopped.

Hard times.—Succeeding such a crisis must follow hard times. Wage earners generally are without employment; manufactories have put out their fires; the warehouses full of goods are under attachment; farm produce is moved very slowly to market; fancy stock of horses, cattle and sheep are unsalable; farm mortgages are foreclosed as rapidly as the laws allow; skilled workmen meet absolute necessities by half time, and common laborers move from place to place in useless search for employment, their families being barely kept alive by charity. The fact that warehouses and granaries are full leads to the assumption that over-production has destroyed the market and the demand for labor. This is quite probably true of all articles of such a nature as to be held for speculative purposes. The staple grains and fancy live stock are illustrations of these. An universal over-production, so long as the articles produced are adapted to current wants, is impossible, since every man's product, if needed, is his means of securing another man's product to meet his own wants.

On the other hand, the suffering of multitudes and the abstinence of everybody lead to the supposition that under-consumption, or failure to use what we might, is a principal cause. It is undoubtedly true that fear of absolute want checks consumption of articles within our reach. This is shown by the immediate increase of consumption as soon as the fear subsides. This, however, is a symptom of the times, rather than a cause.

Some theorists account for the suffering by the ratio of the currency to the population, claiming that a larger circulation of money will fill the empty pockets of the needy, forgetting that money circulates only through the very channels of trade which something else has stopped. It is quite true that any financial legislation involving uncertain results contributes materially to the doubt which stops the machinery. All efforts to make money worth less by legislation have invariably extended the period of hard times. Almost every conceivable cause has been assigned, or given as a partial explanation, for the stagnation of trade. A careful analysis of these recurring periods in the history of our country in 1837, 1848, 1857, 1873, 1887 and 1893, shows many partial causes of disaster in exchange, affecting the peculiar nature of each panic, yet one especial cause is evident in them all. That cause is large investment in fixed capital from which no immediate returns can be expected.

The chief causes of hard times.—Prior to 1837 there was a rapid development of new country, as shown from the greatly increased receipts for public lands. Every new home involves a permanent investment of somebody's savings to the extent of at least $1,000. With the settlement of every new region a considerable waste in real estate speculation is found. A similar expansion of territory occupied by settlement immediately followed the Mexican war, and was a chief cause of reduced capital and consequent lack of employment.

The crisis of 1857 was preceded by enormous waste in the Crimean war. To that was added the loss of a season's labor in a bad harvest and increase of cost of

living, reducing profits. The latter cause was incidental to this particular season, but added materially to the suffering. In this country there had also been an extensive enlargement in iron works and woolen factories without corresponding products.

The panic of 1867, felt widely outside of America, was preceded by immense waste of property in the civil war of the United States, a considerable portion of which expense, on both sides, had been borne in Europe, either during the war or immediately following, through the sale of bonds.

The panic of 1873 followed immense investments of wealth in fixed capital, as illustrated in the Northern Pacific railroad, previously mentioned. Between 1865 and 1873 30,000 miles of railroad were built in the United States alone. This permanent investment involved immense debts at home and abroad, *with all the profits yet in the future*. The fact that imports increased at the rate of nearly $100,000,000 a year in 1871 and 1872 indicates the extent of expenditures. The Franco-Prussian war had also wasted great energies.

The hard times in America, shown especially in the price of farms, about 1888 were immediately preceded by enormous investments in unsatisfactory farming lands and unneeded town sites, as well as in railroad building. Forty-nine million acres of land were sold by the government, and more than 12,000 miles of railway were built. Enormous expenditures were also made for school-houses, court-houses, and other public buildings by sale of bonds. The actual crisis was perhaps delayed and a new speculation fostered by large payments

on the public debt. Again, there was expansion of credit and large investment in railroad and city building in anticipation of future growth, during which the small savings of multitudes had been gathered up through the guaranty loan companies of the West. Upon the top of this came the expenditures of 1892 and 1893 on the great World's Exposition. The expenditure of savings in attendance upon the exposition curtailed the abilities of hundreds of thousands of families. So the panic of 1893 was in no respect an exception to the rule. No sufficient data are at hand for showing exactly how great has been the expenditure in unproductive enterprises, but a reference to Chart No. IV, p. 83, giving the development of railroad building in this country, will show how this form of enterprise in every case outran the increase in population immediately preceding the hard times.

It is evident to any student of the question that extra large consumption of floating capital has immediately preceded every period of supposed over-production. The chief over-production has always been in the machinery of production and trade, including the costly settlement of new land. The immediate dismissal of labor employed in such enterprises brings greatest suffering, because such laborers are always least forehanded and are in large numbers homeless. Such laborers also most readily become competitors for any kind of a job, and so affect current wages of those still retaining their places. This emphasizes the unequal distribution of wealth, and leads multitudes to call for a redistribution, by fair means or foul. This increases the distrust of com-

munity and the disposition to hoard wealth in the form of money, while checking every desire to build for the future.

Remedies for hard times.— The means of recovery from such a disaster are less easy to see than the causes. We know, in fact, that the world does recover confidence among enterprising men and confidence in the future, sometimes surprisingly soon. We can see some of the steps by which the burden of debt is diminished and hopes are revived. In the first place, some method of settlement out of the usual course is adopted. Most obvious is an agreement among banks to carry on the usual machinery of exchanges through checks, drafts and a clearing house without the use of currency. This is called suspension of payment. It holds the deposits steady while the transfer of ownership is easy. It saves the sacrifice of large credit to meet the panicky condition of small trade, and it checks the disposition to hoard money in out-of-the-way places. The actual failures are thus confined to those actually engaged in the wasted production or directly involved as creditors of such persons. The failures in 1873 were said to have been nine in each thousand business houses; those of 1893 were thirteen in a thousand. The actual failures among farmers are confined almost entirely to those who have been caught in the speculative spirit of investment in more land for the sake of increasing prices or have borrowed capital to be used in other speculation. A few only have wasted their substance in expensive homes and luxuries.

If all forms of indebtedness could circulate freely,

the final result in balancing debts with debts would be quite readily reached, and the actual losses would be found less than is generally supposed. An equal loss without distrust, if that were possible, would be met with new enterprise and extra energy instead of despondency.

The various remedies offered in proposed legislation frequently add to the delays in the recovery of confidence. The issue of paper currency, while universally welcomed by the most wasteful of investors, makes those who still have property more doubtful as to the future. The proposition to increase demand for labor by great public improvements comes at a time when revenues are diminished and almost surely is coupled with a proposal of government scrip. To increase the burden of taxation at once, when the mass of the people are already burdened and distressed, is impossible. The issue of scrip, though actually a costly method of taxation, seems to the unthinking a way of making something out of nothing. The certain effect is to extend the period of doubt. Laws affecting the coinage and character of legal tender, since they disturb the relation of borrower and lender indefinitely, postpone readjustment of confidence. Changes in the tariff laws are liable to have the same effect because of uncertainty as to where the influence will be most felt. Special legislation with reference to contracts for labor, however well intended, are sure to hinder adjustment, and all agitation in favor of new experiments in government enterprises or in legislation as to property makes less available the capital and ingenuity of the people.

Cure for hard times.—The only genuine cure involves a restoration of faith in enterprise. It is almost as hard to establish after a commercial panic as after a panic in an army. The remedies best worth study are really preventives, in the form of checks upon undue expansion of credits and distinct limits as to extension of time. Some have gone so far as to wish there were no laws for collection of debts, since this would actually prevent the great bulk of indebtedness; but it would also destroy the essential foundation of daily credit, one of the most productive machines of exchange. The best that can be done is to make more explicit the laws against frauds, and to limit easily transferred forms of credit to those whose foundation can be carefully inspected. It is very desirable that all corporations dealing in credit should be subject to the strictest examination by a public officer.

Short credits vs. hard times.—More important than legal enactments are the business habits of a community, and these can be cultivated by business men. Farmers, of all classes of people, can foster such customs of careful inspection of business standing and frequent settlement of accounts and careful loaning as will make a panic less possible. They need, however, a wider acquaintance with the machinery of business and a firmer faith in the advantage to all concerned of cash payments and absolute promptness in all settlements. The moral power of such a body, amounting to one-half the population, most of whom are solid owners of property, would, if well informed and united in principle, check most of the extravagances in expen-

diture and investment which waste the capital of the country.

Bankruptcy.—In closing the discussion of hard times, it is proper to mention a device for removing in part the discouragement of debts where ability to pay is entirely wanting. Of course, a settlement between debtor and creditors, in which the property of the debtor is divided among his creditors, is always available, leaving both at liberty to begin business anew with a knowledge of the worst that can happen. It seems possible to contrive bankruptcy laws in such shape as to secure a fair settlement of insolvent business whenever the business is evidently failing. If discovery of fraud or misrepresentation could cause immediate intervention in a bankruptcy court, the surest possible check would be brought to bear upon improper credits. It is certainly to the interest of all honest creditors and debtors that a fair settlement should be reached as early after insolvency as possible. Such bankrupt laws should be as wide reaching in their uniformity as government permits. If a national bankrupt law is not sufficient, the states should combine to establish in each the same general system.

CHAPTER XIII

TECHNICAL DIVISION OF LABOR

Economy of minute division.—The advantages, limits and disadvantages of minute division of labor are worthy of a more careful discussion, since they bear upon every kind of enterprise and all classes of labor. A large part of the century's progress in manufacture, and especially the development of machinery in production, has grown out of the extension of this principle of division. An analysis of the particulars by which great saving is made in the cost of production will help us not only to understand the facts better, but to extend the principle in various directions. In the outset it implies the united effort of several workmen in succession and in close combination upon a single product. It is said that a pocket knife, which we buy for fifty cents, has involved in its manufacture the services of seventy-two different persons, doing different things. The perfection of its finish depends upon the perfection of each of these persons in his single act. The cheapness depends upon the readiness with which each act is performed, and the utility of every kind of power employed.

A good illustration of division of labor may be found in the process of butchering hogs in a large packing house. The live hogs enter the building in the upper

story, while able to carry themselves on their own feet. Their weight then moves them easily on through all the stages of the process. Two men catch the hogs by hooking a short chain about the hind leg and slipping it into the notch of an endless chain power, which hoists them to the carrier, a continuous track upon which a roller attached to the chain may easily move. A single man wields the knife which sticks the hogs. Two men are sufficient to manage the scalding trough. One directs the machine through which the body of each hog is jerked to remove by brushes the mass of hair. Four, perhaps, may handle scrapers as the hogs are dropped upon a platform, and six more may use the shaving knives by which every particle of hair is removed. Two are needed with different tools for beheading; and one makes place for the gambrel. Two remove the feet at opposite ends, three with different implements are needed in removing entrails, two are required to halve the body, while another gives it the final washing. The result is that each hog has passed from the pen to the cooling room in less than ten minutes, and the hogs pass under the hands of these several men at the rate of eight a minute. Each man uses but one tool in one particular spot, and repeats that single act constantly. By a similar division of labor eighteen men are employed in skinning a single beef, a different knife being used for each particular part of the body, and all pass in regular routine over the ten or twelve beeves undergoing the operation. The rapidity of this motion can scarcely be conceived by one who has witnessed simply the butchering upon a farm. All this is due to a minute division

of labor into as many tasks as there are different operations, each man having, if possible, but one distinct kind of motion. The saving is not only shown in the increased quantity of work, but in the uniform quality as well. All the workmanship is essentially perfect. These advantages appear more strikingly in the manufacturing arts, where the so-called factory system has brought division of labor to perfection.

A brief analysis of the advantages, limitations and disadvantages is worth our study, because of their possible application to farm industry. So far they have been felt chiefly in contributory manufactures of farm machinery, facilities for transportation, with all attending manufacture, and the factories consuming raw materials furnished from the farms. They apply equally well where division of labor is profitable in farm operations.

Extra efficiency of labor.—Most obvious advantage is seen in the saving of the time of a laborer, both in learning the essential parts of his work, so that apprenticeship is shortened to one-tenth or one-twentieth of the time required for a full trade, and in the far greater dexterity with which he works without change of tools or change of location or distraction of attention. Thus a raw hand in the course of a few months performs his single task more rapidly and more perfectly than an expert workman who must know and practice all the parts of the business. While such a hand can scarcely be called skilled in a technical sense, in the narrow application of skill to one action he may be more perfect than any skilled workman. The fact that each man's work passes immediately under the inspection of

another, whose motion must exactly correspond in time and adjustment, makes any costly oversight in the shape of executive labor very much less, since every step in the process tests every other step. It is also found that minute attention to a single detail tends toward the highest improvement by invention of every tool and machine employed.

While this system is not likely to foster the inventive spirit which brings out entirely new principles in machinery, because the work grows easy by familiarity, it does make the workmen quick to invent the little devices that perfect such machines. A broader culture and more general training discovers the difficulties and devises the entirely new method: the worker hits upon improvements. Watt invented the steam engine, but a lazy boy employed to move the valve hit upon the automatic movement.

Increased efficiency of capital.—The efficiency of capital in production is greatly increased by minute division of labor. The shop room required for each man is reduced to the minimum space for himself and his material. His tools, while the most perfect possible, are the fewest possible.

The machinery and motive power are used to their utmost capacity constantly, and the economy of larger engines and machines is well known. Possibly one-fifth of the power required to move all the machines used by ten men working as independent tradesmen would provide better motion, more constant and cheaper, for the ten working together under division of labor. The waste in starting and stopping of machinery is almost

entirely avoided, and the condition of the machine for doing its work well is kept up to the best. A most important saving is in diminution of waste. The shortened apprenticeship and the superior dexterity make waste from blunders almost nothing. Still more noticeable is the saving from any waste of superior abilities, either strength or judgment, upon actions requiring little ability.

Under minute division of labor a strong man is kept where he is needed and the child may serve where his powers are sufficient. The efficiency of women is recognized wherever applicable, and all the workers have their full abilities made constantly useful. Moreover, the circulating capital represented in the raw materials is kept in use much less time than under the less effective system. Since any article of manufacture passes through all the operations upon it in very much less time, the interest upon capital employed in holding the material and in supporting the labor during its changes is indefinitely less. The quicker returns from this more rapid manufacture are everywhere recognized.

Limits of division.—With all its advantages, division of labor is limited by circumstances. It can never be applied where, because of poor roads or peculiarities of temper or habit of life, the workers are naturally separated. The necessary isolation of the farmers for the sake of space makes any combination for the sake of economy in dividing their tasks almost impracticable. Even where farms are small, few advantages from division of labor by different kinds of work can be adopted. The farmers are too far apart to work directly

into each other's hands. It is limited, too, by the natural demand for the products of labor. If the labor of one man can supply all need of iron work in his community, there is no possibility of employing ten, even with a hundred times the effectiveness. This is well illustrated in the country store, which sells everything over the same counter. Not even the grocery department can be separated until the demand is sufficient to support two store-keepers in two stores.

But even in places where division of labor is stimulated by demand, it can go no further than the number of distinct motions required in carrying through the manufacture of the article made. Indeed, economy requires that each motion should make a complete round, so that the work begins and ends for each worker with everything in the same position. The exception is when a motion with great exertion requires an interval of rest before a second. Two men with a cross-cut saw, although their motions are alike, do more than twice as much as one man, because of the relief in pushing back the saw.

A most important limit, however, is made by the inconstancy of natural forces employed in any industry. This is notable in all the processes of agriculture. No matter how many workers combine in raising field crops, they can gain but few advantages from dividing their tasks minutely. Each laborer must be employed through the year, and the change of seasons requires that he be ready for all the operations of the different seasons in planting and tilling and gathering through all the succession. Ordinary changes of weather, cold

or hot, wet or dry, windy or calm, make necessary changes in his labor. The uncertainties of each year as to moisture and heat require a variety of ventures, so that no farmer dares confine himself to raising but a single crop. Even under the most favorable conditions the different stages of growth are so intimately related that the watchfulness of the same interested manager is required at every stage. A delicate plant must be carried delicately, even in transplanting. More important still are the conditions of fertility, which make a rotation of crops and even mixed farming essential to highest productiveness. If each field must have its definite series of cropping and tillage, together with the application of animal manures, the advantage of these combined operations under the oversight and labor of a single farmer outweighs the advantage of more perfect division of labor.

The result of all these limitations, so obvious in agriculture, is that farm work is but slightly more effective or more continuous than it was hundreds of years since. While improved machinery has immensely reduced the cost of certain processes, a year's labor involves innumerable changes of employment, so that no farmer inquires, in hiring his help, for an expert in any direction, but wants a man of all work whose skill is largely ingenuity in adjusting himself to the constantly changing duties.

Suggestions of fuller division of farm labor.—It seems possible, with the improved condition of agriculture and the nearness of ready markets, to attempt a larger use of division of labor in several directions. A group of

farmers, well acquainted with the possible advantages, may classify their farms as grain farms, dairy farms, breeding farms, feeding farms and market-gardens. Such a community of interests would find not only the advantages of exchange between each other, as well as the rest of the world, but would soon build up bodies of expert young men in the several specialties, whose work would be at a premium everywhere.

With these interests recognized, still greater division of labor is possible. An expert in the care of trees and prevention of diseases to fruits and vegetables can quickly find employment, and may perfect himself in all the requirements of successive seasons. A dairy expert may find use for his superior knowledge and skill on successive tours among the dairy farms. Every farm large enough to employ several men gains some of the advantages of division by making each man responsible for a definite part of the farm work. The less the workmen are handled in gangs, the better each one's abilities can be trained to meet his responsibilities. These possibilities are greatly increased by every device for diminishing the effect of weather changes. Under-drainage gives large advantages in this direction from lengthening the time during which the same operation can go forward. Means of protecting crops in the field serve a similar end.

Perhaps the easiest application to be made in any neighborhood is a system of marketing, through keeping an expert collector and distributor of produce busy in a limited region. All the waste of articles too few to be carried to market is practically saved, and constant

association with the markets of the world is made possible. Especially is this applicable to small fruits, milk, butter and eggs. If this market wagon can also serve to carry the daily mail for all the neighborhood, the problem of rural delivery would be almost solved with a trifling expense. Even where such a measure is not possible, neighboring farmers may approach such results by combining for market and mail days in a circle, each taking a different day of the week when he will do his neighbor's errands.

With increased confidence in mutual interests, it seems possible that specialists in various directions might grow up among a united circle of farmers. The use of machinery and blooded stock can certainly be greatly increased by careful adjustment of interests. Great improvements in seed and in methods of culture may be discovered by agreement among a body of farmers that certain individuals shall make a specialty of those improvements. It is even conceivable that a rotation of crops might be carried on upon a dozen farms, while each farmer gives his attention to his specialty. It would require, of course, a much closer combination in credit with each other than has yet been found among farmers. At the very best, however, farming must still remain the most prominent illustration of limitation in the application of the great labor saving and capital saving by minute division of labor.

Disadvantages of extreme division.— The great addition to wealth so distinctly traced to division of labor is not gained without some disadvantages to the community. Almost certainly the inactivity of body com-

pelled by confinement to a simple portion of a trade induces physical weakness. The health of workers in factories is often uncertain, and the average of life is known to be reduced. While steadiness of employment contributes to steady habits, the reduced activity contributes to weakness. Perhaps even more perceptible is the tendency toward narrowness of mind. Ingenuity is developed in the "Jack of all trades," although his information in regard to each one may be limited. The man who knows all about a very small part of one trade has little to stimulate his mind to exertion. Indeed, habit is liable to make his very action and judgment purely automatic. The fact that the raw hand can be quickly made effective makes the stimulation to self-education even less than in ordinary circumstances. The constant dependence of each laborer upon the routine of his work and his absolute dependence upon authority for his employment lead naturally to lack of self-control. A man may grow almost like the machine he handles, responding only to the demand of his overseer. These tendencies foster also a growth of class distinctions. Such workmen are thought of as operatives, held in a class by themselves. They may be expected to know little of the interests of community outside their own circle, and are often distrusted in matters of common welfare. They themselves distrust the leadership of those upon whose management they depend for employment.

All these disadvantages may be overcome by more community of interest among workers of all classes for their comfort and improvement outside their tasks. It

is a fact that associations for the advancement of workers in social and political freedom and mutual self-support have grown most rapidly in the neighborhood of factories, where division of labor is extreme. A truly philanthropic spirit may be in entire agreement with the massing of labor for greatest accomplishment. The places of least development are always found where crowds of laborers work in mere gangs or wholly unorganized. The wholesome influences surrounding rural life are everywhere granted so far as physical development goes. They may also be granted in communities of general enterprise with reference to ready ingenuity and judgment. The farmer's boys moving to the cities carry not only physical strength and endurance but a mental capacity for ready adaptation to emergencies which develops into wisdom. The majority of leaders in great enterprises are still expected to grow up on the farm. This is undoubtedly in part due to the impossibility of cramping by extreme division of labor. At the same time a partial application of its principles is needed to bring leisure for some general culture and larger acquaintance with the progress of the world. As the evils of factory life can be cured by attention, so the weaknesses of rural life can be removed by a careful study of its needs. True education in both quarters is essential as a means of mutual understanding and adjustment of interests.

CHAPTER XIV

AGGREGATION OF INDUSTRY

Great combinations.—The tendency toward improvement by combination of laborers through the possibilities of division of labor leads to still larger combinations in so-called factory systems, and even to a combination of factories in large corporations. This tendency has been especially marked since the multiplication of labor-saving machines and more perfect systems of transportation. Indeed, the possibility of extensive machine using, as well as extended division of labor, rests upon a combination of many forces under one general management. Beyond these advantages, saving is found in the necessary care for waste products, which often may be turned into profit, greater freedom of action from closer community of interests, greatly enlarged facilities for marketing, and the best possible devices for handling and transporting products.

All these advantages in great establishments are readily perceived, yet some have doubted whether the gains are so distributed as actually to increase the general welfare. Farmers, perhaps, as readily as any persons, distrust the power of great corporations. Wage earners, generally, in the expression, "corporations have no souls," express their distrust of results. Yet so far

as they actually introduce improvement in production so that variety of products is increased and the cost of production reduced, the whole community gains in large measure the total saving. Any one can realize the advantage by study of a single article of every-day use. In the middle ages the cloth in a garment was worth eight times the wool from which it was made. Now the value is chiefly in the raw product. The price of iron affects every farmer through the cost of his tools and implements or the quality of either. Compare the modern steel hoe, first in quality and then in cost, with the hoe of fifty years since. Then measure that cost in its relation to a day's work, as compared with the same measure in 1850. All are in this way benefited by reducing the exertion needed to procure any one article of use, since more exertion may be left for meeting other wants. If machinery and improved methods have entered less into the farmer's home life, he can find his own advantage from the range of such improvements in other directions by thinking what a pound of butter will buy for him today as compared with what it would buy before the period of machinery. (Chart No. XIV, p. 107.)

The introduction of labor-saving machines is a direct addition to human power and economy of time, and a means of converting useless material to meet human wants. That a new machine throws out of employment workers in that particular field brings a hardship which ought to be shared by the multitude who are benefited; but the probabilities are great that the improved method of manufacture will so increase the uses for the product as to bring into employment a far larger number of

laborers. The spinning jenny threw out of employment several thousand spinners in the old way, but in twenty-five years the cloth-makers in England had increased from less than eight thousand to three hundred and twenty thousand. The machines which in 1760 were thought to have ruined some eight thousand cloth-makers, in 1833 employed two million persons. This is only a striking illustration of what has happened in every direction. It is perfectly evident that communities using the most machinery pay larger wages and far larger welfare to every laborer. It is not too much to say that the actual comforts within the reach of every laborer have been more than doubled within the last hundred years.

A few illustrations of the actual saving in cost of production and distribution may be interesting. Complicated machinery can never be used in producing upon a small scale, just as a small farmer can never afford the use of a harvester. All the benefits of invention applied to machinery have come through its use on a large scale. A factory making a thousand pairs of shoes each year cannot use such machinery as the one making a million pairs will need. Each one of the million pairs, therefore, costs the world less than each one of the thousand pairs. Again the large establishment, like an immense saw mill, being obliged to care for its sawdust, may devise a way of making this waste product of use in pressed blocks for kindling, or possibly in buttons or wood ornaments. The waste of the shoe shop is only a nuisance, but the waste of a great shoe factory is ground and pressed into all sorts of useful forms. All such saving of

waste is so much added to the world's store of wealth.

That the large establishment saves unnecessary friction is shown in the order of any great mercantile establishment. It is still more noticeable in immense iron works separated from every other form of industry for the sake of freedom of motion. In these ways, principally, there is a saving of labor in the huge department stores, although the facilities for advertising, advantages for transportation in large bulk and the employment of expert salesmen in every department contribute to the same result. The general expenses of an ordinary store are estimated at nearly 40 per cent of the difference between wholesale and retail prices. The same expenses in the great coöperative store at Paris, the Bon Marché, are only 14 per cent. While the controllers of capital in the large enterprises have the first advantage of such saving, the very necessities of their business compel a sharing with their employés and with the public.

Even the so-called trusts, supposed to be contrivances for controlling the market, have really served in many instances the welfare of the whole community. A biscuit trust, in handling the most of the crackers in the market, saves great expense of advertising, a still greater expense in sales by traveling salesmen, or drummers, and immense waste of stock on hand through condensation into fewer warehouses, reduces its insurance to actual cost, and has brought to the public by means of all these savings a greater variety of crackers of almost uniform quality suited to the fluctuations of demand at a reduced price. No one doubts that even the Standard Oil Com-

pany, by means of its savings through consolidation, has at the same time preserved the general supply of oil from waste and brought it to every man's door, with a great improvement in quality, comparative safety in use, and an almost constantly diminishing price.

The record of facts shows that with all the tendency to great aggregations, and so to concentration of power, masses of wage-earners have had their hours of labor shortened, have gained facilities for culture in libraries, lectures and voluntary associations, have gained habits more systematic, and regular methods of life with greater constancy of employment, have better protection of civil rights, better provision for education of children, a larger insurance against accident, and a better provision for hospital care when disabled. The same system has provided methods for economical use of savings in joint stock companies, and cultivated a general unity of purpose and appreciation of others' welfare. Withal it has given to the mothers of families an immense increase of leisure for home-making, and at the same time has opened ranges of employment for women without homes. Even the rate of wages has not been diminished, but rather increased, as is shown also by actual records. That the great establishments cannot pay less than average rates is evident from the multitudes seeking to enter their employment. Moreover, they must pay their workmen regularly or appear bankrupt. Employers on a small scale can easily postpone upon all sorts of pretences, and failures are frequent. Suppose the distribution of milk in New York city were under a single management. A systematic division of territory would at once reduce the

number of milk wagons by at least one-half. The certainty of responsibility would insure uniform purity, and means of transportation could be brought to perfection, so that the amount now delivered would actually cost perhaps not more than two-thirds the present price. While at present prices the profit would be large, the necessity for investing those profits would at once call for extension of the trade by reducing the price, and at the same time increasing the proceeds to farmers somewhere who furnish the larger supply. The better quality and larger quantity for the same money would certainly increase the demand, and probably with direct benefit to the milk-raisers. The essential element of distrust of individual management in large enterprises as to fair distribution of the profits stands in the way of such a combination.

Limits to aggregation.— It is easy to see that the advantages of great establishments cannot always be gained. The limits of demand restrict the possibility of profit in supply. The element of space in connection with the market and in relation to the buyers makes an important limit. Special advantages of location on a small scale may outweigh the advantages of aggregation. Utilization of forces in nature, like pure water or water power, or special qualities of raw materials, may outweigh all other considerations. In general the requirement of interested oversight in a single superintendent has checked such growth. The more perfect, however, the system of management, the less effective is such a limitation. It is possible with extreme division of labor to make distinct rules take the place of per-

sonal direction, and oversight is reduced to a minimum. All these limitations serve to check the too rapid growth of this factory system and to hold in check the tendency to misuse of power in possible monopolies. Any raising of prices which diminishes the demand destroys the advantage of a great combination. It makes its profits by the quantity of its products sold. A reduction of the quantity much more certainly than a reduction in price destroys the advantage. Hence a monopoly gained in the ordinary progress of trade can seldom operate for any long time to advance prices, though it may destroy the competition of smaller establishments completely.

Disadvantages of aggregation.— It is impossible to overlook a considerable number of disadvantages to the welfare of a community in a too rapid aggregation of its industrial enterprises. It changes large numbers of laborers from independent workers to wage earners, and thus makes them a part of the great machine, with an immense momentum in production which does not so readily yield to the fluctuations of demand. An independent worker is not worried if he has a leisure day. The great establishment cannot adjust its machinery to a lessened demand without a uniformity of reduction in wages or time of employment, or else the discharge of numbers of employés. This is one of the causes of over-production so evident in certain directions upon the coming of financial crises. Another great disadvantage is seen in the breakdown of any such enterprise. Then its employés, trained for its particular uses, find themselves not only without employment, but

unfitted to drop into other niches of usefulness. The absolute routine of the great establishment so fixes habits as to make very difficult a change of work except in line of promotion in a similar organization. The dissatisfaction and distress from such absence of employment is more apparent than in ordinary poverty.

The strongest objections, however, to the great aggregations are found in the possibility of oppression through a monopoly of business, and therefore almost absolute control by a few persons of the interests not only of a large body of employés, but of every competitor upon a smaller scale. A large combination practically compels all to yield to its methods. The certain economy of methods has led to the statement, "Where combination is possible, competition ceases." The common saying, "Competition is the life of trade," becomes untrue whenever that competition implies a costly service. Competition is supposed to reduce cost by stimulating energy and ingenuity. But when that ingenuity can be better applied in combination, the result is the destruction of competition. Competition may drive the milk wagon faster, but combination will deliver more quarts of milk in the same time. The natural opposition to combination rests upon the same ground as the opposition to improved machinery. It certainly throws out of their ordinary employment a considerable number of independent workers.

This power of the combination is a constant temptation to unscrupulous and grasping managers to increase their advantage by vicious discrimination and false competition, expecting the destruction of others' business to

increase their own. The largeness of the operation makes more plain the injustice of the maxim, "All is fair in trade." The final dangers of combination are thus likely to be overestimated. It is not true that any larger proportion of false methods of business enters into the large establishment than into the small, and the possibility of profit in a great combination is quite as truly dependent upon the universal welfare as anywhere. The same extremes of prices mark the range for these establishments as for any others. The price cannot continue higher than buyers will pay with an increasing disposition to buy more. It cannot remain lower, of course, than will enable sellers to continue living as well as in any other business. Checks upon increased price come as certainly from substitutes as from rival production, and the ability of the people will always gauge the amount of sales. The expression "What the trade will bear," means a price such as not to diminish consumption. Indeed, the business principles of a great trust are essentially the same as those in any single manufactory. A trust which stops the work of certain factories in a combination for the sake of diminishing the output, because of danger to prices from too rapid production, follows the same principle as a farmer who stops raising wheat from the probability of too much wheat in the market. The farmer would better lose the use of his land for a time than lose the advantage of both land and labor by over-production of wheat. In the same way a trust may wisely hold its fixed capital unproductive till the consumption of the community reaches the full extent of its power to

produce. The power of one combination to interfere with the workings of another by indirect methods, like investment in the other's stock, is an evil to be treated like any fraud. Laws and courts are in the power of the people, and should preserve the rights of all.

One great danger of large combinations is the tendency to govern by iron rule instead of by fair judgment of individual cases. This is a difficulty always connected with great enterprises, to be cured as growth advances through establishing well trained experts whose judgment makes the rules not only good in themselves, but well executed. The government itself is subject to the same difficulty, as seen in the handling of an army, and is obliged to meet it in the same way. Even the abuses often referred to from enormous difference of wages between the executive officers and the inferior operatives are quite possibly only a natural method for solving these difficulties. A first-class officer has no difficulty with his men. In general those institutions whose management is costly do better for their workmen than the weaker institutions with weaker men at the head.

The supposed dangers from too rapid improvement in the machinery of production are scarcely to be credited in the light of improvements during the last hundred years. Every improvement has certainly given a larger enjoyment and better employment to the masses of people. The enterprise which invents better ways of accomplishing anything is the best possible means for enlarging and stimulating the wants and abilities of the whole people. The very profits themselves are sure to

awaken larger enterprise, and even if the accumulated surplus is distributed in so-called watered stock, it does not cease to promote production. The wider the distribution of stock, the more permanent and more generally satisfactory is the working of the great combination. If employés themselves become sharers in the business, the true interests of all are likely to be promoted. When the savings of the multitude can be perfectly united in a joint stock company, to furnish the capital with which the same people work, the general conditions of wealth production for all the community are fairly met.

Bonanza farms.—An illustration of some effects of aggregation may be seen in the enormous farms of the wheat regions of America. There machinery is introduced as far as possible, all work is methodically planned and executed, and wholesale rates in purchases and in transportation are secured. The result is that certain staple products, especially wheat, are raised at a cost far below the average cost to moderate farmers. The result is large profits upon the capital invested, in spite of the fact that such farms do not make best use of soil fertility and certainly do not maintain the best condition of soil for future use. This, however, is due rather to the nature of pioneer farming, which makes immediate use of the powers of the soil, than to the nature of the management. It is conceivable that the same ingenuity may continue the development of large farms under greatly improved agriculture. In that case the general effect will be much more widely felt than now. So far it seems that bonanza farming is

confined to a very few lines of production, where everything is bent in the direction of lessening labor instead of benefiting the soil or making homes.

There is no question as to the general advantage of small farms in making farm homes. It is a question whether the general improvements in agriculture, except in machinery and its use, have not come from the diligent ingenuity of the small farmer in making most of his own acres. Ben Franklin said, "The best manure for the farm is the foot of its owner." The interested constancy among small farmers certainly develops both character and ability in any country. This fact has probably been one reason for the small farms of large parts of Europe. One-third of France is cultivated by owners of farms averaging $7\frac{1}{2}$ acres. Four-fifths of Bavaria, Belgium and Switzerland are in farms of less than twelve acres. Even Prussia has 900,000 farms of less than four acres. These farms vary in quality from poorest to richest, and peasant farmers are not able to boast of their wealth. Yet some of the most fertile regions are made so and kept so by the labor employed upon the small farm. Some of them also involve large capital. The Isle of Jersey, where land is worth $1,000 an acre, is so divided that an average farm is eight acres. Of course, but little labor-saving machinery reaches these places. Tillage with the spade costs five times as much as tillage by plough; yet the small farmer finds such advantage from its use as to call it gold mining. It is probable that the strong competition of immense farms in grain raising, possibly also in sugar raising from either cane or beets, and in seed raising, will awaken among the smaller

farmers attention to finer grades of farming and more care for the fertility of their fewer acres.

On the whole, the tendency with increasing population is toward smaller farms with more intensive farming. Whether our country, with its stronger commercial energy, will follow this tendency as exhibited in northern Europe seems doubtful. It is not likely that we shall ever admit the legal restrictions under which division and subdivision have made their way in that region. The question will doubtless be settled by economic conditions independent of legislation. At present we are far from either extreme, as can be seen by reference to Chart No. I, p. 9.

Department stores.— Increasing application of the principles of aggregation is seen in the so-called department stores, which not only deal in everything but with everybody, extending their trade by mail over large territory. The very evident economy of such aggregation of capital for purposes of exchange appeals so directly to the customers as to make the sufferers in competition cry out in vain for restrictions. Such stores seem sure to maintain their advantage in exchange, except with reference to mere local distribution of every-day necessities and expert handling of specialties. The community does well to give attention not so much to restrictions upon this trade as to reduction of opportunity for abuse of power over the mass of employés under control. The great establishment will certainly bring more satisfactory conditions in time than the multitude of small ones beyond the reach of public inspection.

Trusts.— Of late years the advance of combination in so-called trusts has been enormous. The underlying principles of economy already illustrated furnish the occasion for such combinations, but the immediate advantage to promoters of such enterprises, because of the supposed power in control of the market, is found in the speculative interest in stocks. In this respect the multiplication of trusts will furnish the principal weapon against them. Yet the dangers to the industry of the country, as well as to the safety of exchanges, from such rapid consolidation of management are easily perceived. It is certainly necessary that responsibility for such enterprises be definitely fixed upon the share-holders. And it is more than probable that government inspection of such business may become as necessary as it now is of the banking systems of our country. Some students of the subject foresee a final assumption of absolute control by the government of all industrial enterprises as a result of this tendency to aggregation. The question cannot be discussed in this connection, since it involves a wider range of welfare than can be considered under production.

Possible combinations for farming.— It is proper to close this chapter with suggestions as to the possibility of gaining the advantages of combination for farming communities without disturbing the present condition of ownership of land. When our farmers generally shall have outgrown the disposition to make money by emigration, so that each farming community is made up of farm homes with a stable population, more intimate associations for farm operations than now are possible ought to become

the rule. Suggestions have already been made as to the possibilities of greater division of labor, but other advantages of combination in the way of labor saving can certainly be secured. More definite business methods and mutual confidence in a neighborhood of farmers make possible enormous economies in the way of mutual protection and advantage. The removal of fences, with possible combination in seeding and tillage, a universal method of dealing with insects, blights, rusts and similar plant diseases, the handling of products in company, and above all a perfect sympathy in all methods of improvement, education and development of enterprise, will accomplish wonders.

CHAPTER XV

SPECIAL INCENTIVES TO PRODUCTION

Good government chief.— The productive energy of any country is encouraged chiefly by what we call good government. This means especially security of property rights by prevention of frauds and robbery of every kind, and free interchange of ideas, as well as of products of industry, and general public intelligence. It is not enough that individuals throughout a community be fairly intelligent, but they must have sufficiently mutual ground of intelligence in common purposes and common interests in everyday work to bring without effort a perfectly mutual confidence. Where these essentials are absent no devices can operate extensively for the encouragement of energy in production. Where they are present it is always possible to add extra incentives, to give direction at least to the energies of the people, and perhaps to increase those energies. Some of these incentives are too important to be overlooked.

Premiums.— The most simple means of encouraging enterprise is found in premiums of various kinds offered by individuals, local societies or municipal authority. These operate by adding to the natural advantage of energetic labor some special reward in recognition of its

accomplishment. Illustrations are familiar in connection with so-called fairs of all kinds where prizes are distributed for the largest product of a kind, the most profitable crop, the best article for any purpose, the greatest variety of crops or stock, or for any conceivable device which seems to add to the producing power of the community. Governments often offer premiums for plans of public buildings, and sometimes for offensive weapons. All of these operate upon the one principle of arousing special energy by superior advantage given to the successful competitor. Its advantages are evident. Its disadvantages sometimes outweigh advantages. It encourages somewhat the spirit of gambling, resulting in devices for winning the prize through false representation. It exaggerates the importance of showy qualities for the sake of notoriety, and it fosters those jealousies which too constantly interfere with the welfare of communities.

Both advantages and disadvantages are well illustrated in agricultural fairs. These have proved a most admirable stimulant to better agriculture, where clear-headed, intelligent judges have judiciously distributed prizes of such a nature as to have their chief use in establishing the quality of the product shown without catering too distinctly for the enthusiasm of the crowd or for individual profit. The chief end of all such incentives is rightly found in the educational influence from comparison of products and the establishment of standards which the whole mass of the people may be led to accept.

Bounties.— A less common but extensively used in-

centive is in bounties. These are advantages of various kinds, frequently in money, given by local or general authority for peculiar services or special enterprises. A familiar illustration is seen in the bounty of late years offered by different states for the production of sugar, especially sugar from beets or from sorghum. The object is evidently to arouse the energies of a community in a special direction, with the expectation that the establishment of a new industry will, in the nature of exchange, promote the welfare of all. Some countries have stimulated foreign exchange by a bounty upon exports, such as Germany now pays upon the beet sugar exported to other countries. Of the same nature are the gifts made by local communities for the establishment of mills factories, railroads, irrigating ditches, all of which are supposed to bring profit to the community in general in much larger proportion than the special enterprises have received. The principle is the same when bounties are offered for the destruction of wolves, foxes and other vermin, or when standing rewards are given for the arrest of criminals.

There can be no question of the right of a community to offer this extra stimulant to particular exertions, but the wisdom is doubtful. In the first place, bounties are liable to withdraw capital and labor from more certain methods of production to more uncertain methods. Indeed, the chief object of the bounty is to entice into experiments those who would otherwise hesitate. The advantage of the bounty is very liable to be overestimated. People hasten in steps to secure bounty without careful study of the business they undertake. This is

especially true of bounties for establishment of factories in new locations. They attract the least experienced and most speculative men, without consideration of the far more important elements of immediate market and convenient employment of labor. Railroads are built for the bonds voted without care for future profit. Enterprises of this kind, promoted by bounties, are especially liable to failure. The history of development in the west gives overwhelming evidence of their weakness. Even when the bounty is offered for reduction of vermin, it is often misapplied. Numerous cases are on record where the bounty became a stimulant to enterprise in raising the very animals to be destroyed. Even rewards for the arrest of criminals seem sometimes to create a body of men who thrive by fostering a criminal class, with a hope of sometime getting a profit from arrests. As a means of stimulating general industry they are too unstable to be satisfactory. Most probably political parties are in constant contention over the maintenance of the bounty. No more insidious enemy to the purity of politics can be found than the selfish interest aroused by special bounties.

Monopoly privileges.— Government monopolies have been a favorite method in past ages of fostering particular enterprises. These are in the nature of an exclusive privilege, granted to individuals or corporations for the manufacture or sale of particular commodities, and occasionally for special public services. These were once a method of showing royal favor, and the word monopoly has in its very nature the idea of inequality. Hence they are unpopular under all circumstances, except when permanent and universal advantage is secured.

License.—The monopoly of service is secured by the issue of a license. If granted through official favoriteism, the wrong is easily appreciated; if granted to all who conform to necessary requirements for the general welfare, as in showing qualifications for teaching, compounding of drugs, or practice of medicine, the license is recognized as useful. In fact, it seems to furnish security for satisfactory governmental service, and is the basis of all promised reform in civil administration.

Patent and copyright.—The chief illustrations of a genuine monopoly maintained by government authority are found in the patent upon inventions and the copyright upon publications. A patent is conferred upon the inventor of "any new and useful art, machine, manufacture or composition of matter, or any improvement thereof," upon proof that the invention is original, not previously in use anywhere, and likely to be beneficial rather than detrimental. This patent secures to the inventor the sole right to make, use or exchange articles manufactured after the pattern described, or upon the principle involved in construction. This monopoly is limited usually to a term of years supposed to be sufficient to secure to the inventor a reward for his exertion. The patent laws of the United States protect the rights of an inventor for seventeen years, entitling him to damages upon proof in the proper court of infringement upon his patent. Such protection extends, of course, only throughout the territory under the same government. It may be secured, however, in foreign nations under special regulation, so as to cover

the most of the civilized world. The copyright serves the same purpose, and is limited in much the same way, for securing to the products of thought or of taste a proper reward for the powers exerted. It gives to an author control over publication of his thoughts during a period of twenty-eight years, in order that the users of his thoughts may actually pay what they are worth. This, too, is confined to the limits of the government issuing it, unless by agreement an international copyright is provided by the laws of the several countries.

Franchises.—A still more noticeable monopoly is granted by municipalities under what is called a franchise for the establishment and maintenance of water supply, public means of artificial lighting and heating, or means of public transportation. These are under government control usually in cities, because they employ the public streets for carrying on the enterprise. The franchise is really an extension of the license in particular directions. This is usually issued with the expectation of great public benefit from a large investment of capital which would not be made without relief from competition, because not immediately profitable. The franchise usually carries with it certain restrictions as to use of public highways and limitation to a term of years. It necessarily involves the right of government inspection and control for the general welfare.

Difficulties from monopoly privileges.—All of these monopolies are granted for the purpose of conferring upon the whole community benefits that could not

otherwise be secured. They are wise only so far as they secure this result. If the patent right system wastes the energies of inventors in contrivance of useless devices, there is loss; if it builds up a class of mere speculators, there is waste; if it fosters monopoly beyond the giving of a fair reward for invention, it is robbery. The exact limit of time during which a patent is good stimulates to the utmost exertion for wide introduction of its benefits, and at the same time prevents the burden of lasting monopoly. The dangers are chiefly in the administration of patent laws, from the careless issue of undeserved patents, or in a combination under a series of patents to maintain a constant monopoly. It is a safe rule to issue patents only for particular applications of scientific principles and not for the discovery of the principle, which can be protected in publication by copyright. Departures from this rule cut off the possibility of more perfect contrivances and fair competition in devices and methods. There can be no question of the general advantage of protecting a genuine inventor from the trespass of others to secure him a fair compensation. No other plan for a fair exchange of such services has even been suggested. The unsettled question is the proper limit of time for a patent to run.

The advantages and disadvantages of copyright are essentially the same in character, though the dangers are less. Since the large part of the reward of an author or an artist is in the repute he may secure, there is little danger of fostering an unfair spirit of monopoly. The franchise is subject to the same princi-

ples, but its dangers in practice are very great. So long as the advantages to the corporation securing the franchise may be enormous, if it is sufficiently extended, there is great temptation to bribery, both in the original issue and in the maintenance of inspection and municipal control. Nothing has so interfered with good government of cities as the manipulation of franchises. These abuses underlie the popular call for municipal ownership of water works, lighting plants and street railways.

Protective duties.—A still more widely extended method of stimulating industry by special incentives is seen in what is called a protective tariff. This is a system of duties upon articles produced in foreign countries so levied as to check the natural competition by increasing their cost to consumers. The increased cost of such articles, if not too great to destroy the demand, increases the incentive to manufacture similar articles within the country.

The schedule of tariffs becomes then a very important element in all productive industry, and requires the nicest adjustment to the needs and abilities of the nation. If associated, as is usually the case, with the raising of government revenues, the adjustment becomes more difficult, and requires the judgment of experts in commerce as well as in statistical knowledge of industries and government necessities. While in any country the existing tariff is presumed to have been established to meet public need, the fact that there is necessarily a restriction upon freedom of exchange makes it always open to question. The tariff laws, like

all laws restricting freedom of action, must always have evident reason for existing. The burden of proof rests with the one who defends such laws. This is especially true with reference to tariffs, because the trend of civilization is certainly toward greater freedom of intercourse in all directions. The barriers between nations are generally giving way before the introduction of ready transportation and quick communication. The statesman who maintains the necessity of restrictive tariff must always stand ready to explain this obstacle to more complete association. For this reason we have the constant agitation of tariff questions and the impossibility of permanent settlement in any particular.

For the same reason there are always two phases of a tariff discussion. The student of social science inquires chiefly as to the tendencies of advancing society with reference to such restriction, and, seeing the barriers becoming less and less, is likely to seek the final removal of every such restriction. The statesman, busied with the immediate conditions of the limited community whose interests he guards, is liable to be for or against any particular restriction as it fosters or hinders those interests. For this reason statesmen, of whatever party, are subject to the bias of local interests, and have even been known to change their views with a change of such interests. In our own country, when party lines are drawn upon the tariff, it is quite possible that sectional lines may also mark the party supremacy. In fact, it is possible for any man to believe in freedom of trade as the ultimate condition to be sought, while he favors in immediate practice restriction or even

prohibition by a definite tariff. The purpose in this chapter is to give a brief outline of arguments for and against such tariff in general, leaving entirely to practical statesmanship the decision of special questions.

Reasons for protective tariff. — A system of restrictive tariffs is thought to contribute to the welfare of an entire community by artificially increasing the natural diversity of employments. If new enterprises can be fostered, exchanges are greatly increased, all the advantages of exchange are secured within the country, and the general intelligence of the people is increased. With this comes the enormous advantage of what is called a home market for the cruder products of industry. This is especially to the interest of farmers raising bulky products or those not likely to bear transportation. It is further thought to foster a better agriculture by a more natural return to the soil of elements removed in cropping, the nearer body of population making such return possible. It is also thought to make at once available the natural resources of a country in mines, quarries, water powers, etc., which might otherwise long remain useless. It is contended for as a means of checking unfair competition between a long established community with special advantages for factory methods, either in large accumulations of capital or low wages of laborers, and a newer country where capital is scarce and wages are high. It is sometimes held to be a means of maintaining a high standard of wages through the advantage actually conferred upon certain lines of industry, upon a supposition that competition at home without these favored industries would

reduce the wages maintained in other industries. If a tariff on wool calls into profitable use a large amount of farm capital in sheep raising, every wheat raiser is at the same time benefited by reduction of competition in the wheat market. If the capital and labor employed are enticed from other countries, the effect is the same by increasing the demand at home for the wheat. That this does not operate so long as wheat raisers come to a market where a surplus must be consumed in other countries does not destroy the argument, since the tendency is to reduce the surplus. The system is also thought to encourage, in lines of industry likely to prove productive, a rapid development of labor-saving machinery and new methods of manufacture, which may some time give to a nation superiority in the markets of the world. To many there seems a much more important reason for restrictions, in order to establish every needed form of production for the sake of national independence. That nation which contains within its own borders the means of supplying all the wants of its people is supposed to be more capable of independent growth, and to be freed from hampering competitions of trade, that may lead to wars and, perhaps, to extreme suffering in case of foreign war.

For abundant examples in support of these various propositions, appeal is made to the history of the world by comparing countries developed under a restrictive tariff with less developed ones free from such restrictions. The history of our own country, under the ups and downs of tariff legislation, is also appealed to. Even the extra cost of certain articles to the whole

people, which is the sole basis of advantage to the fostered interest, is thought to be more than compensated by the direct advantage of increasing competition at home, where it will have the most wholesome effect upon the market price. Proof of this, too, is sought in the rapid development of iron and steel manufacture, where protective tariffs have been most persistent.

Reasons against protective tariff.—Against a system of protective tariffs many strong arguments are not wanting. It is contended that a tariff on iron goods, for instance, is just so much an added burden upon all consumers of iron, and, since the bulk of consumption enters into the cost of articles of universal use, the greater part of the burden is borne by the poorer classes of people, who consume as much as the more wealthy. If the restrictive tariff actually limits the introduction of foreign goods, as must be the case if it acts as a stimulant in production, the revenues received are far from being in due proportion with the cost to the people, since essentially the same tariff is paid by the consumer whether the article is imported or manufactured at home. Although it is not true that in every instance the tariff is a tax, in so far as it benefits the home manufacturer by advanced prices it must be. In so far as it operates for protection of favored industries, it certainly fails to serve the purposes of revenue. The diversity of employment evidently fostered by tariff is said to be unnatural and likely to continue expensive, and any advantages of market at home are sure to be overestimated, especially with reference to staple products of the farm, since the surplus necessarily forming

a basis for prices must be sold in foreign countries without the advantage of direct exchange for articles of their own production. That is, if our tariff restrictions limit the market of a foreign people, they also limit the ability of that people to purchase the products which we are obliged to sell them. It is contended further that a rapid development of varied industries, instead of maintaining soil fertility, tends to more rapid exhaustion by making more probable the consumption of cruder products of the farm in villages and cities too remote for return of fertility, although within the same country. The development of natural resources under stimulant of a tariff is admitted by its opponents, but represented as a waste of effort, since the tendency is to withdraw capital and labor from more productive industries into less productive, and that, too, at the expense of the more productive. If factories cannot give an equal profit with farming, it is absurd to tempt capital away from the farms into factories. So, although wealth may be accumulated in showy enterprises, the people, as a whole, are less thrifty and bear unequal burdens. It is further contended that the total labor of the community, when a part is used in unprofitable development of resources, is made on the whole less productive, and therefore the people are less able to buy their neighbors' products, and must live with diminished comforts. In that case all the haste in developing natural resources is actual waste.

If, on the other hand, the restrictive tariff invites capital from abroad for the sake of gaining the trade of a country, the diminished profit of labor in some foreign

country compels emigration, and such emigrants are likely to follow the capital. Only the poorest of foreign laborers will be compelled to help themselves by emigration, and only those will gain by the change of location. Thus it is said a restrictive tariff encourages the least desirable form of immigration. This is illustrated in the development of the mining industry through the fostering effects of the tariff.

There can be no question that any restriction upon trade may foster the contrivance of combination to secure monopoly. Hence it is often claimed that the existence of trusts is due in great measure to tariff restrictions, preventing the competition natural in the commercial world. It is certainly true that the restriction of a patent right may make possible the abuses of a trust. If trusts were confined to protected industries or to countries maintaining protective systems, the weight of the argument would be stronger. It is certainly true, however, that the wider the range of competition without restriction, the greater the protection against combination for sake of monopoly. The monopoly in kerosene oil would be a greater menace but for the possible check of competition from abroad.

Such artificial restrictions, again, prevent the naturally rapid growth of international commerce, which gives the surest foundation for more permanent conditions of peace and greater extension of welfare over the world. The tremendous interests of the commercial world are the strongest safeguard against unnecessary warfare, and the best protection to any nation is the fact that it makes itself needed by all the rest of the world.

Thus inter-dependence of nations rather than independence is the essential aim of those who seek the world's welfare. An alliance of two peoples for commercial purposes is the best guaranty of mutual support of national institutions.

In proof of all these statements, the experience of the world in widely varying regions is appealed to. The natural breaking down of prohibitory tariffs has given opportunity for observation. Especially has the commerce between states of the Union, where it is absolutely free, shown the general advantage of such freedom in rapid development of wealth and welfare. While these states have a common interest in government, they are nevertheless widely distinguished in peculiarities of local government and in characteristics of people. While, therefore, there is possible doubt as to the wisdom of rapid removal of restrictions, there is every probability that such restrictions will gradually be outgrown. Even the temptation to make retaliatory duties, where other governments restrict against our products, is growing less with increasing experience of the true advantage in exchanges. The world is gradually coming to see that the better market any region of country affords for the rest of the world, the better market the rest of the world affords for it.

Incidental tendencies from tariff. — The incidental effects of restrictive tariffs, and especially of the necessary instability of restrictive legislation, are too interesting to pass by, though very limited space can be afforded them. In the first place they contribute to a speculative enterprise which leads to waste of wealth in

unpromising undertakings because of a necessary overestimate of the advantage given. On the other hand, a reduction of the same tariff after a series of years is almost sure to bring panic in that line of industry previously fostered. So the fluctuations of tariff laws are one element in periodic expansion and contraction of business. The tariff laws are certain, also, to involve the worst element of influence through the lobby upon legislative bodies. Even though the charge of bribery be utterly false, the general respect for legislative bodies is lowered by charges and countercharges for political effect. As an occasion for such charges scarce any other form of legislation serves as well. Even the people themselves are easily assumed by their neighbors to weigh their opinions upon a tariff measure by their personal interests.

The indirect influence of a new tariff law upon the industries of a country can scarcely be foreseen. So interlocked are all the varieties of manufacture and trade that a change in price of any one article of commerce may affect hundreds of others, sometimes much more than the article restricted. It is easily seen that a duty upon iron of a particular shape or quality may actually prohibit the use of that iron in some product which already touches the margin of profit. These incidental effects can scarcely be foreseen by even the wisest statesman. The practical adjustment of conflicting interests in the framing of tariff laws should be the work of experts. If all parties could unite in establishing a bureau of commerce, domestic and foreign, as dignified as the Supreme Court of the United States, and

as independent of party interference, such a body might frame a consistent tariff law, gradually perfecting it in adjustment to all interests and explaining its bearings to all parties. Such a body could take account of the great interests of agriculture in the commerce of the world, and weigh properly the indirect influence of restrictions. The marked influence of fluctuating tariff upon sheep raising, so familiar to all farmers, might then be fairly appreciated. Under present methods it is very certain that any tariff law is largely a compromise, with limited judgment, between agitating conflicts of interested promoters. The farmers, of all people, can afford to be conservative of all interests, and should favor such methods as will work toward enlargement of commerce without destruction of industries. If possible, they will wisely seek the removal of tariff questions from practical politics.

In concluding this subject, it is wise to suggest that the true principle of regulations for national industry are the same as those for true family economy. The family should so plan its work and ways as to make the best possible use of the powers of every member. It is no economy to buy cheap things unless the members of the family can be better occupied than in making them. It is poor economy to make those things which cost more time and effort than would be used in making something else for exchange. Home production is best when this makes the home labor more effectual, but worst when it interferes with the profit of labor. The farmer who stops harvesting to mend his harness when he might employ the harness-maker is wasteful; but if he

mends it on a rainy day he saves time which would otherwise be less profitably used. So the nation whose capital and labor are not well employed may do wisely in developing new industries, even at a considerable expense for introducing the new industries. But if all the nation's energies are profitably employed, the costly development of resources may wisely wait for future capital and labor. So all special incentives require a constant inquiry as to beneficial results supposed to follow, and the policy of the government must conform to the needs of general welfare. Even vested rights are subject to the law of welfare involved in the original act establishing special privileges. Public use, not private interest, is the true reason for the existence of any such privileges or protection.

CHAPTER XVI

BUSINESS SECURITY

Conservative influences.—We have already seen the influence of governmental organization upon various phases of production; but the chief fostering influence is the general stability of a community, not only in its laws, but in its customs and habits of life. Security in property rights is a chief condition for accumulation of wealth, and a still more necessary condition for industry. Not even want will drive people to industry when there is no certainty of possession when the work is accomplished. The fruits of industry must be safe. While the laws of the country are naturally considered the guardians of rights, the customs and habits of the people, the actual origin of laws, are even more important. Bad habits actually nullify good laws, while bad laws may be made quite endurable by good customs. Thus, the welfare of every community depends upon a conservative social influence, preventing abuse of opportunity for injury and stimulating individual energy.

The rights of life, liberty and property must first be dear to the mass of the people before laws can be framed for their protection. This is especially true in a self-governing people, but is essentially the same in the most absolute tyranny. So the chief safeguard for every kind

of business is the honest character of all business men, and such influences as establish good character and sound judgment will be fostered on the simplest business principles. The farmer who sells his grain or his fruit by false samples cannot complain of false weights and measures at the elevator. The one who gloats over victory in a horse trade has no right to grumble at a trickster in wool buying. The man who is caught by the offer of a gold brick is not only foolish, but false, and diminishes the security of himself and everybody else in fair bargains and genuine business. The man who takes advantage of his ignorant neighbor deserves to be at the mercy of a more crafty dealer. Every one who makes a false use of power over a workman beneath him may expect a false use of power from an authority above him. So all business interests, as well as all rights, are secured by the right spirit in all men.

Nature of insurance.—The fundamental activity in accumulation of wealth is foresight; but no foresight can prevent all disasters. Fire, flood, wind and wave are beyond control, because in some sense they are beyond knowledge. Against such forces no foresight can secure. The name insurance is given to every method by which the burden of such unforeseen losses is provided for beforehand and fairly distributed. The average of such losses can easily be estimated by experience. Statistics show a wonderful uniformity in the misfortunes of life as well as the fortunes. Even though chance be an element in every transaction, the average of chances can be distinctly calculated; and that average is essentially constant among a sufficiently large number of instances.

All are familiar with the application of such calculations in fire insurance. Among ten thousand houses a certain number will be destroyed by fire every year, provided those houses are widely distributed under essentially similar conditions. The ten thousand house owners can insure each owner against entire loss of his house by mutual agreement to meet their share of the total loss. If ten houses are burned, each of the ten thousand house owners will pay one-thousandth part of the total loss, making a burden easily provided for. If at the beginning of the year each has laid aside this sum, the loss will be met when it occurs without disturbing the welfare of any. The machinery for such provision is called an insurance company, and the separate payment of each house owner is the premium or award expressing his share of the provision. This principle of estimating losses and providing a definite way of meeting them is the same in all forms of insurance. It has been recognized for hundreds of years, but only recently has entered into the business life of the world in all directions. For a long time false notions of reverence for the power that wields destiny stood in the way of such distribution of misfortune; but now the mass of people everywhere regard such foresight in united sympathy as natural as the planting of crops.

Various methods of insurance.— Satisfactory insurance rests upon certain definite business principles which every insurer may wisely study. There are various devices for accomplishing the same end. A body of men sufficiently large to make the average of losses uniform may bind themselves by a simple agreement to

meet each loss as it occurs. To make this plan satisfactory they will need efficient business men as officers to devise means and methods for making the agreement effectual, for estimating the actual loss in each case, and for distribution of the claim by assessment sufficient to cover the loss and the expense of collections and estimates, as well as the maintenance of the officers. These officers must maintain the business standing of the organization in the community, so that it shall continue for a long series of years to keep its numbers large enough to maintain only the average loss.

This is a simple mutual insurance company, upon the assessment plan. Its weakness lies in the comparatively slight interest taken by each member in the selection of its officers, in the absence of security for the payment of assessments when needed, in the long delay liable to attend collections, and the uncertain interest of the officers in exact adjustment of losses. Such companies are liable to be too small to give a fair average of losses, and in any serious emergency to fail for want of expert business ability and trustworthy character in officers.

If, instead of the assessment after losses, a definite percentage of probable loss is paid in advance, the responsibility for use and maintenance of such funds calls for a business character and ability in the officers which usually secures better results. It especially avoids the danger of slackness and failure on the part of the insurer. It leads to closer scrutiny of actual losses, and helps the insurer to more carefully measure his interest, since he already has an investment in the business. Any

overestimate of expected losses may be returned in dividends to the insured, or may be retained as a surplus for security against losses above the average of experience. The only weakness of this method is in the power entrusted to individual officers, elected on the ground of popularity by comparative strangers. Even when a board of directors chosen from well-known business men is added to the machinery, the dangers from incompetent and dishonest management are not avoided. Such directors are too prone to consider their names their only contribution to the welfare of the association.

A joint stock company, insuring with definite premium, is likely to bring the best business management, the quickest though not always the fairest adjustment of losses, and the confidence of the business community. Its prosperity, however, is hindered somewhat by the common judgment that the interests of the stockholders must be against the interests of the insured. The actual cheapness of insurance depends not so much upon the amounts paid from time to time as upon the actual quality of the insurance purchased. Assessment companies of all kinds, without a legal lien upon definite property, are decidedly lacking in quality, since their guaranty of payment involves the financial credit of every person insured. No one should be deceived by the promise of insurance at cost, until he knows exactly how genuine that insurance will remain during the period of years for which he desires it.

Governmental control of insurance.— The essential importance of insurance and the difficulties of providing

against fraud and mismanagement have led naturally to government inspection, and in some countries to government control of insurance agencies. The laws of various states provide differently for inspection and reports, and restrict the action of companies in various directions. It is probable that time will develop the necessity of greater uniformity of insurance laws and more definite requirements in the way of published reports and expert inspection. At present, insurance commissioners often have the confidence of neither companies nor people, and no expert knowlege is demanded in the candidate for that office.

The desirability of insurance by government direct is questioned so long as governments themselves are unstable and popular will favors laxity in the business machinery. That insurance could in this way be made cheaper is a matter of doubt while great masses of people magnify their claims against government and minify their obligations to it. Frauds against government in both taxes and claims are proverbial. At any rate, governments will not wisely undertake the indefinite applications of insurance until larger experience and wider acquaintance with the methods in vogue are reached.

Applications of insurance.—The applications of insurance are indefinite in variety. There is no limit to the possibilities except in the lack of experience to settle the average of hardships. Insurance of property against fire and storm is well understood and almost everywhere practiced. Insurance of life is almost equally extended, in which the head of a family may in a meas-

ure provide against the suffering of his family in his unexpected removal by death. This is easily extended into insurance against accident. In this, as in life insurance, there is some lack of experience, as yet, as to the actual cost. It is possible even to insure against dishonesty of employés through so-called bond and security companies, which issue bonds for definite amounts payable in case of failure of the person whose character is insured to meet the expectations of his employer. Such companies, in their own interest, exercise an influence over the character of those for whom they have given bonds by attention to their habits of life and business methods. They make more prominent the maxim, "Honesty is the best policy," whether they actually cultivate honesty in fact or not.

There is no conceivable limit to the possible applications of the principles of insurance. It seems possible that a body of business farmers, subject as they are to so many disasters from weather, insects and contagious diseases of stock and vegetation, might devise methods of equalizing and diminishing the disaster from such losses in a common system of insurance. As a basis for such systematic action, careful statistics for large regions of country are absolutely necessary. With such losses clearly presented and averages fairly estimated, insurance would be just as feasible as it is now against fire. It will be wisely undertaken first upon such matters as can be most definitely measured in dollars and cents. Losses from accidents to teams and other live stock have already been studied and insurance to a limited extent attempted. The difficulties of such insur-

ance are greatly increased by the ease with which owners may contrive to market unsalable stock through a false representation of misfortune. The possibilities, however, of extending the advantages of insurance in a business of this nature are worthy of more careful study.

PART II

Distribution of Wealth for Welfare

CHAPTER XVII

GENERAL PRINCIPLES OF FAIR DISTRIBUTION

Wealth distributed, not welfare.— In considering the principles of fair distribution among all the parties contributing to production of wealth, it is necessary to remember that wealth and not welfare is the subject of thought. A child may have equal right to welfare with his father, but cannot in any sense have equal ownership of wealth. The welfare of a complete imbecile may be the care of the state, but he can in no sense control wealth. Distribution of wealth cannot, therefore, include the subjects of charity, but must be confined to a study of the natural relations between individual owners of wealth or individual contributors to production, which make control of a portion of accumulated wealth essential to individual welfare.

A pound of tea may include in its value the efforts of a hundred different persons. What are the principles upon which those hundred people may be fairly compensated by the actual consumer of the pound of tea? This

illustrates the complexity of the whole subject of distribution. No drinker of tea would dare to settle the question of fair distribution arbitrarily. No one would even offer a theory by which a perfect settlement could be reached. Yet when the pound of tea is put upon the pantry shelf, the fifty cents paid for it has already been divided into a hundred unequal portions adjusted by some method of custom to meet the ideas of every helper in the long list. Each has had some portion of the wealth produced, though the distribution may have taken place in different countries, under different laws and customs, through a period of months or years. This distribution involves the whole question of industrial freedom, and rests finally upon the principle of equity as applied to ownership of one's powers and the product of those powers. It also involves, to a certain extent, the decision of what is properly wealth and what is properly a part of universal welfare.

The important questions connected with the subject will not be satisfactorily settled until a reasonable adjustment of all claims is reached by the masses engaged in production. The modern discussions of the interests of laborers are proof that the world is thinking more and more of individual rights in property, and no sweeping assertions as to inequity of property rights help to solve the questions. It is because each individual has a distinct equity in what is produced in part by his efforts that there is need of better adjustment. All reforms, therefore, must be along the line of fair distribution, or fail of their end.

Distribution by exchange. — Ordinary observation

shows that distribution is made chiefly in the customary method of exchange. A pound of butter may find its way from the farmer's dairy to the actual consumer in a distant country. In its final value, the consumer compensates the retail dealer for his services in handling it and for advance payments, including every other handler and every other service, down to the boy who drove the cows to pasture. If the system of universal exchanges is free and fair, each has received his fair compensation. In general, then, distribution of wealth is made automatically in the ordinary processes of production, exchange itself being one of the steps by which value to the consumer becomes value also to the producer.

Fair exchange above laws.—Under perfect freedom of exchange, the general law of supply and demand already illustrated is more effective than any laws can be in adjusting wages or profit to efforts in production, and in adjusting interest or rent or both to the capital employed or to other means of production controlled. Any customs or laws which interfere with natural conditions of supply and demand hinder rather than help toward a fair adjustment. In any progressive community such laws will surely fail, for the reason that in making such laws human nature is in conflict with itself. The history of increasing individual welfare in any part of the world gives a story of more ready and free competition in open market for all commodities and all services. In perceiving this we must not overlook the fact that fraud and ignorance, as well as arbitrary power, stand opposed to fair exchanges. Nor must we

be satisfied with any condition which involves meeting restrictions with restrictions or force with force. Such conditions must be but temporary.

Actual and nominal compensation.—In considering compensation for any services, it is necessary to distinguish carefully between the actual compensation in welfare and the nominal compensation in money. A farmer in Nebraska may get a larger return for his labor with corn at 15 cents a bushel than he could in Massachusetts with corn at 40 cents a bushel. Just so a wage-earner, receiving $1.50 a day in Ohio, might lose in welfare by exchanging work with his neighbor in New Mexico, who gets $2.50 a day. This means that $1.50 in Ohio may buy more comfort than $2.50 can buy in New Mexico. This is very important in comparing the wages of different classes of workmen in the same country, as well as the wages of similar workmen in different countries. It has an important bearing, too, upon relative profits and interest. The actual compensation in welfare is the natural basis for adjustment in all distribution, and the law of supply and demand rests directly upon this.

Wages, profits, interest and rent take the product.—It is common to consider distribution as made in the forms of wages for labor given without risk as to the product, profits to the one whose labor is associated with risk of loss as well as gain, interest to the one who furnishes capital in any form and waits for his compensation, and rent to the landlord, or owner of estate, whose property is used for a definite time and returned. It is evident that any advantage received in any of these

ways, at any time, must come from the actual available goods in store suitable for division and consumption. The farmer cannot pay his hired hand with his farm, though he may be able to do so with his products. The farmer himself cannot realize his profits until he has the proceeds of his work in the shape of consumable goods. So, at any particular time, the total of products fit for consumption makes the source from which all distribution must come. Debts and credits can have no consideration in the total, for the reason that they exactly offset each other. A general conflict of interested persons as to wages, profits, interest or rent comes from the difficulty of sharing in the actual goods at hand. The relation of each to the whole depends upon circumstances to be discussed in future chapters. It is certain that the larger proportion of daily production goes to the mass of the people who consume their share from day to day. It is estimated that fully 80 per cent of such wealth is used up by those who contribute no use of capital to the productive force. It seems probable also that this ratio is increasing rather than diminishing, but no statistics are sufficient to show the exact facts.

Cheap standards of living.—In the natural competition of laborers with each other, the general standard of living — physical, intellectual and moral — have an important bearing. The Chinaman in this country competes with the American upon a wholly different plane of living. His habitual needs being less, he is willing to work for wages that will not tempt the native American. If he can do the same work, living as he

does, he necessarily becomes a cheaper force in production, and the American must find a better field for his energies or go without employment. Under ordinary circumstances, the introduction of laborers able to live more cheaply acts upon the better class of laborers exactly like the introduction of labor-saving machinery. It first brings hardship from direct competition, but the cheapening of products brings enlarged demands and so gives new impetus to production, requiring the very skill which the better class of laborers alone can furnish.

Thus the employment of Chinamen upon railroad embankments made places for native laborers as section bosses and engineers. The Huns and Italians that underbid the Irish miners in Pennsylvania have destroyed the "Molly McGuires" by making the same men responsible for larger enterprises. Yet the standards of living, which show a constant improvement, indicate a truer freedom of competition and a clearer recognition of individual wants and abilities. No one can watch the development of any country without realizing that its thrift, enterprise and progressive welfare depend largely upon increasing wants. Men who live best produce most and enjoy most.

CHAPTER XVIII

WAGES AND PROFITS

Wages distinguished from profits.—In discussing the subject of wages and profits, it is necessary to remember that both are compensation in different ways for actual exertion. If in estimating profits we sometimes include a return for the use of capital, it is from incomplete analysis of the forces in use, since the interest upon capital can easily be separated in all actual practice, and in most enterprises is counted as a distinct expense to be provided for in entering upon the undertaking. The profits really belong to the management of any undertaking, as return for the exertion in that management. In everyday use the term wages is applied only to the stipulated amount paid from time to time for services rendered to another. There is practically no difference between such payments made for service by the hour, day, week, month or year. If, however, the engagement for service is by the year, the name salary is more likely to be given than wages.

Further, the term wages is most distinctly applied when the service is rendered as a task, and wage-earners when found in considerable bodies are usually called operatives, under the natural classification of labor explained and illustrated in Chapter III (page 35).

The services of an overseer are much more likely to be permanently required, and his wages are therefore called a salary, estimated by the year even though payments be made monthly or even weekly. In this case, the labor is chiefly executive, taking a higher rank because of the greater powers required. In this case the overseer is supposed to have definite plans provided for his work, and to carry out those plans to the best of his ability.

If, in contrast with this, one's efforts are given to managing a business, devising the ends to be accomplished as well as planning for their accomplishment, he is said to have entire responsibility for results and to receive what he can make out of the business. His exertion is chiefly speculative labor, and the returns for his *speculation* or foresight—often effort of the severest kind—are termed profits. Such efforts have already been illustrated in Chapter III, page 35. No generally accepted name has been given to the one who thus carries the entire responsibility of the business, but the word manager conveys to most people the general idea involved. While it is true that a manager may sometimes work for a salary, in general the very inventive ability required for success makes the stimulant of profits the most natural means of securing higher effectiveness. Most managers, even of stock companies, must from the nature of the case be at least sharers in the profits. Farmers easily distinguish between those who work for stipulated wages, often called farm hands, and the farmer himself, who gets the pay for all his endless variety of labor, including his constant planning, in the shape of profits.

Wages defined.—Hence it is fair to define wages as a stipulated sum, paid at stipulated times, for stipulated services, measured either by the number of distinct services or by the time of service. A wage-earner must therefore be one who sells his powers, whatever they may be, for the use of another, bringing his own services rather than the products of those services to the best market he can find. In general, he prefers the definite promise of another to the indefinite chances that he may produce what is to be wanted in the future market. Very often he considers the bird in the hand worth any number in the bush, and is satisfied to take a certain living from day to day rather than risk his ability by his own contrivance to meet larger wants. Among the wage-earners we necessarily find all individuals of undeveloped powers of body or mind, dependent upon the rest of the community for both tools and task; also all who render personal services, and most of the laborers of all sorts in every kind of factory.

Profits defined. — Profits may be defined as the indefinite returns for exertion, including all risks, which any manager of his own or others' industry secures by bringing his products into open market. In general the term includes the recompense for any kind of labor, however rendered, if the uncertainty of demand and supply belongs to the one who renders the service. Thus even the fees of a lawyer or a doctor come under the general principles of profits, whenever the conditions of payment in any respect depend upon success. If, on the other hand, such fees are stipulated sums for a stated service, they fall into the rank of wages. That

the dividing line between wages and profits is not always clear is shown in comparing payment by the piece in manufacturing clothing, for instance, and payment by the hour for the same kind of work. In the payment by the piece, the stimulant of enterprise borders upon the nature of profits. In payment by the hour, that stimulant is wanting. Yet we are likely to consider the difference as simply a difference in method of estimating wages. Two men ditching side by side may work, one by the day and the other by the rod.

It is possible even to combine the two systems of payment so as to involve both wages and profits. Farm hands in England have been paid a certain price per month, with a share in the profits, measured by the number of cart-loads of grain marketed. Clerks and agents frequently work for stipulated wages, with an added percentage upon the value of sales. Most farmers in estimating the results of a year's labor count their own services, at the price of a hand, as a part of the cost of their products, and distinguish as profits the surplus of product above all expenditures. Thus a farmer may estimate as outgo the interest on capital invested, the wear and tear of machinery, the produce consumed upon the farm, the taxes paid to the government, and the wages to all who labor, including himself and his family. Any return from his products beyond enough to meet these outgoes he will consider profits. These will reward him for extra foresight and contrivance in management and marketing, as well as risk arising from possibility of failure in his plans, destruction of his crop or stock, fluctuations in price, and un-

certainty of collection for his sales. Such risks and exertions every independent worker assumes. Usually the exertions are impossible to the inexperienced, and the risks cannot be taken without accumulated capital or a credit established upon well-known character and ability. This fact naturally limits the number of competitors for profits. The effect is clearly illustrated in the difference between an ordinary farm hand and the renter of a farm. Few farmers would encourage the best of their farm hands to take the burden of risks and care implied in renting. The successful farm renter requires abilities and means, gained only by experience and accumulation.

Wages vary with abilities employed.—The variation of wages among different classes of workmen in the same calling is universally recognized as dependent upon the powers employed. The strictly operative labor is usually paid by the hour, day or week, the terms varying with the supposed strength or skill exerted. Executive duties commanding monthly or yearly salaries vary with the total amount of responsibility implied, the large establishment requiring greater abilities than the small one. The strain of responsibility increases in some degree with the number of operative laborers employed, and successful oversight of many hands may be essential to their profitable employment. In that case the salary of the overseer gains something of the nature of profits, since the manager gauges the pay by profits expected. If, as in great stock companies, a manager is hired at a stipulated salary, his personal abilities, as tested by accomplishment, are likely to be the sole

gauge of wages. A successful manager of a great enterprise can scarcely be said to have a market price for his services, but will estimate himself in large measure by the profits he might secure as an independent business man. Within limits, such salaries will vary with the experience and inventive ability required.

Supply and demand in wages.—Wages in general are subject as truly to the law of supply and demand as are the products of labor. If few places are vacant and many applicants seek those places, it is impossible to prevent the reduction of wages through the anxiety of some applicants to secure places. On the other hand, if few applicants seek the places open to many, each will find the employer most willing to give an increase of wages for his work. Laws cannot prevent such natural competition, though they may hinder it. Even organization under secret bonds can only temporarily restrain. Human nature is stronger than any arbitrary restriction.

In general, then, wages in any particular occupation may be affected directly by limited competition. Any necessity for peculiar abilities of body or mind, or for preparation by education or training, makes certain, as far as it goes, a limited competition, and therefore the opportunity for higher than ordinary wages. In the same way, if unavoidable hardships or dangers are involved, comparatively few workers will seek such employment and can have larger pay. If, however, the dangers carry with them a stimulating excitement and exhibition of daring, arousing admiration for the worker, this may offset entirely the effect of the danger.

Soldiers and railroad employés for such reasons do not command pay in proportion to the dangers met. Any employment where there are obstacles to natural advancement or where continuance is uncertain does not attract applicants except by higher wages. Illustrations of all these occasions for limited competition are found everywhere.

Stimulants to competition.—If any occupation shows circumstances making entrance easy for new applicants, or if advantages for promotion are readily seen, or if it seems to have a special respectability with the advantage of social privileges, especially if it in some respects seems a work of philanthropy, there will be multitudes ready to engage, and willing to undertake the work at less than average compensation. It is commonly said that these peculiar advantages are a part of the compensation. They operate simply as a stimulant to competition, making more people willing to enter such employment at small wages than would be willing without these special advantages.

A good illustration of such employments is found in common school teaching. While a teacher does need an expensive preparation, and success is dependent upon special adaptability to the work, it is nevertheless true that the work can be taken up readily and as readily laid down; it confers upon the applicant the privilege of social recognition and somewhat of personal dignity; it gives opportunities for some note in the community, and, with all, it is considered a work of philanthropic character, entitling to the gratitude of the public. The result is that teachers everywhere command less of salary or

wages in proportion to their abilities than other classes of wage-earners. Fortunately, this stimulant to competition appeals largely to those characteristics of the individual teacher which make him more serviceable in his calling. The opportunity for a life of study, added to other considerations, makes still more effective the competition of earnest, philanthropic students, such as the world needs for teachers.

In the lower ranks of teachers, competition is still more increased by the fact that common school teaching can be temporarily carried on in the intervals of study, without interfering with mental growth. Teaching is also specially adapted for the temporary employment of young men and women not quite ready to enter the actual life work. Acquaintance with human nature, which it fosters, is thought to be good preparation for home and business life. The employments in which women largely engage as wage-earners are chiefly of this temporary character. The fact that the life work of most women must be the making of the home hinders competition in employments where long apprenticeship or special skill of any kind may be demanded. Any temporary employment not only appeals to her sense of capacity for earning wages, but seems better adapted to her future. If that employment at the same time affords opportunity for social life and calls for the natural adornments of youth, the young woman considers wages only a small part of the general consideration, and is satisfied with a bare living. Hence clerkships in stores, subordinate positions as teachers and places as typewriters are crowded with applicants at wages insufficient

for a life-time support. Employment in domestic service, which might be supposed more consistent with the larger work of life, is rendered less attractive by the almost entire absence of social privileges and natural opportunities for advancement in knowledge of the world. Girls who would prefer house work, with equal social freedom and the natural stimulant of contact with other young people, compete for lower wages in less satisfactory employment during the years of their girlhood. This is less noticeable in country life, where girls in domestic service become a part of the household and share in the privileges of the young people at home.

Another illustration of the depressing effect upon wages of excessive competition is found in the work of women upon cheap clothing. This work is usually done by the piece in the home, and can be taken up at intervals between household duties. Many women consider earnings of this kind a mere addition of spending money to a somewhat meager support in their home life. It can be carried on without display, and so preserves the dignity of persons who would otherwise shrink from wage earning. The result is a very serious competition, reducing wages below even enough to sustain life and character.

These are only illustrations of what happens in every calling when circumstances stimulate excessive competition. Relief can come only from larger range of satisfactory employment and a clearer distinction in favor of genuine wage-earners and genuine employers among the mass of the people. The customs of society have a much stronger influence upon the life of women in steady employments than upon that of men. A thor-

oughly enlightened community can do much to enlarge the sphere of such women as are naturally wage-earners, by proper encouragement of their enterprise.

Fluctuation of wages.—Wages in every employment are just as naturally subject to fluctuation under the law of supply and demand as are prices of commodities. Whatever operates to increase the number seeking employment, or to diminish the amount of employment open to competition, reduces the wages. Whatever increases the opportunity for employment, or diminishes the number of persons seeking employment, increases the wages. This is well illustrated in the cost of harvest hands in a year of large crops as compared with a year of small crops. Any financial disturbance, checking the building of railroads and other great enterprises, brings multitudes of would-be farm hands to compete with those who naturally follow farming. On the other hand, the introduction of factories or mining industries has sometimes affected directly the wages of farm hands through a large region by lessening competition.

Upward tendency of wages.—It is certain that the general tendency of wages in all employments is upward rather than downward, in spite of serious disturbances from financial depression often repeated The gradual increase of welfare among wage-earners is greater even than the increase in money wages. Those who are inclined to join in the cry that the former times were better than these can be answered as they were in Solomon's time, "Thou dost not inquire wisely concerning this." No doubt the transition from small workshops to large ones and from small factories to great combina-

tions has caused friction in adjustment to the new conditions. Many are now wage-earners who were once profit-gainers. But with the improvements in association and a clearer understanding of abilities and needs, each worker becomes a stronger factor than ever before in bringing about a fair competition and a satisfactory compensation.

There are still new difficulties in every change of method. The influence of custom often retards freedom of movement, makes more slow the natural rise of wages, and hinders a gradual adjustment to new conditions. In many cases it prevents individual enterprise among wage-earners, and crowds from the higher ranks into competition with the lower because of no natural outlet for ambition. Even laws intended to protect laborers sometimes operate against them. Thus a law restricting the terms of contract between workmen and their employer has sometimes prevented the employer from investing capital in a business which otherwise would have increased the opportunity for labor, and so would have actually increased wages.

The effect of free schools upon ability to earn is generally recognized. The best estimates place the increase resulting from common school education at fully 25 per cent. Some of the best establishments are limiting their offers of employment to young people who have had the advantage of even high school training. This more general education tends in two ways to increase the compensation of wage-earners: first, by giving a clear knowledge of abilities that makes competition fairer; and second, by increasing the general effective-

ness of all production, which enlarges the sum to be divided.

Every movement toward greater social freedom and uniformity of opportunity contributes to the same end. Next to slavery, social caste is the chief obstacle to free and fair competition of laborers. Any barriers of race, social organizations, or even churches, which cultivate exclusiveness in any direction, in the end work hardship. If they bring temporary advantage to a few, they are sure to hamper the freedom of many. The welfare of the community is surest when social conditions favor the freest communication in all ranges of employment, whether in wage-earning or in profit-making.

The cheapening of transportation in recent years, bringing all the world nearer, has had various effects upon wages. It has destroyed, to a considerable extent, the inequality of wages between different regions of country. If laborers of any kind are scarce, a telegram will within a few hours bring numbers from some place where they are too plenty. The result is a tendency to greater uniformity throughout the world. As yet the full effects of this progress are not realized. Some hardships will undoubtedly be endured from the ready introduction of unskilled laborers from crowded countries into our less densely peopled country. But with a larger range of production opened by cheap labor, our better workmen will find more constant and more remunerative employment. If restrictions upon immigration are necessary, it must be to prevent too sudden a transition, hindering adjustment to new conditions. The danger of overcrowded population comes

more certainly to the nation excluding itself from the great world by excluding the rest of the world from itself.

The general effect of improved machinery has been several times referred to already. Its advantages come to the wage-earner directly in multiplying employments and in multiplying the demand by cheapening products. Indirectly, the benefits are still greater, because these cheaper products form the bulk of living for the workers. It is probable that even the better living thus provided has raised the efficiency of labor so as to command better wages. It is certain that every movement of civilization which gives a clearer knowledge of human nature and the world about us adds to the power of every man, whatever his work. We may welcome every element of progress in this enlightenment as a direct help to the portion of humanity recognized as wage-earners. The better the masses of people understand each other the better each understands himself; and that understanding is the best protection against oppression of circumstances or of men.

Variation in profits. — Profits in various pursuits, like wages, are affected by limited competition. The need of special abilities and experience in any particular undertaking keeps back the timid from that enterprise, and the accumulation of experience of a peculiar kind hinders one from turning to other occupations. Even if a young man is willing to take the risk of inexperience as a manager, he can seldom gain the confidence of those who control capital. Hence competition in new and untried enterprises is slight, and

profits are often great. Other undertakings are of such a nature as to involve great uncertainty. The risk of failure retards the cautious, and so the most enterprising win great returns. In estimating such returns, we overlook the failures and count only the great successes. Sometimes accidental opportunities open to the few a limited range of enormous profits. Legislation fostering monopoly sometimes favors such opportunities. These are usually temporary, and such advantage cannot long be maintained under the most fortunate conditions. Secret methods have sometimes controlled the market for individuals with enormous gain, and in a few instances a nation has maintained such secrecy with apparent success. But these, too, quickly yield before competing enterprise, since wage-earners under such employers must share to some extent the secret, and will have the stimulant of enormous profits to use the secret for themselves.

Profits in competition.— Profits are themselves a stimulant to competition, and competition in every pursuit tends to reduce the profits. If any circumstance apparently insures more than average profits in any undertaking, competition becomes excessive and profits vanish. The promise of a tariff on wool leads farmers to expect an advance in the profits of sheep raising. Competition begins in the purchase of flocks, by which the profits of those already in the business are greatly increased. Competition continues by multiplication in the flocks until sellers of sheep are more plenty than buyers. Thus, the stimulant to competition has operated to lessen profits in the end. A famous sheep

raiser in New York, when asked to give a maxim for success in the business, answered, "Buy when your neighbors sell, and sell when your neighbors buy."

Similar experience has been noted in various pursuits. The tendency, however, with wider knowledge of others' wants and efforts is toward a greater uniformity of profits. Modern methods of production and clearer perception of ways and means make it easier for competition to have its full effect between different kinds of business, as well as in the same business. The more we know of our neighbor's work through the daily press and extensive travel, the fairer is the opportunity for competition to act. This tendency brings hardship to the weaker portion of managers engaged in any particular business. This makes the power of so-called trusts and great combinations apparently harmful. In the end, however, the result is more constant profits, though smaller, and the advantage of the whole community in a more stable business. It is even conceivable that the stimulant of fair profits may finally reach a larger proportion of the community through interest in the great establishments than in the past from the unequal and uncertain returns of independent managers.

Even among professional men, whose fees for services have somewhat the nature of profits, the same law of competition, dependent upon supply and demand, holds sway. The compensation of an author for his publications, though protected by copyright, is dependent upon conditions limiting competition or stimulating it. It is customary for surgeons, physicians and dentists to make a fee proportional to the demand for their services.

Thus the skilled dentist, who is wanted by ten times as many people as he can serve, raises his price till the demand is limited to meet his strength. This enables younger men at smaller prices to gain the opportunity to establish like reputations by doing equally good work.

Profits in agriculture.—The profits in agriculture are subject to the same laws. Many influences operate in both directions. The limitation of land fit for agricultural purposes has a tendency in itself to increase the profits of land-holders, under the principle of monopoly, though its chief effect is on land values. The increasing wealth of the world, and the greatly increased wants of the civilized community, multiplying manufactures, limit competitors more and more. The relative number of farmers in our country is gradually diminishing, while the demand for food is actually increasing beyond the increase in population. Men are predicting every year a scarcity price for wheat,—unwisely, probably,—through the limited range of possibilities in wheat raising. The introduction of labor-saving machinery enables enterprising farmers to greatly increase their product for the same number of acres, and still further to increase the range of management so as to make larger farms a possibility. The rapid advance of means of transportation has so widened the range of competition as to make the farmer in one part of the world compete with the farmers of every other part. The staple products, especially wheat, being so easily adapted to new countries, are constantly liable to over-production. At the same time the effects of a bad season in any particular region, while reducing the crop, are not

likely to advance the price to the same extent as formerly. The opening of vast regions once considered deserts to a rapid settlement by farmers for the sake of the profits in land speculation has again and again wrought changes in the entire business of agriculture. Similar effects may be expected still with the development of South America, South Africa and Siberia.

All these facts tend now to make the profits in agriculture decline, and the fact that farm life has certain attractions in establishing permanent homes for families and life-time associations, contributes to this tendency by holding people to their place as farmers for at least a generation. The possibility of independent enterprise, even with small profit, and the freedom of family life from interference of neighbors make large numbers of farmers willing to continue their business in spite of the reduced earnings.

Fluctuation in profits.— It is proper to call attention to the rapid effects of any change in market upon the profits of any enterprise. Wages are in large measure an anticipation of profits, and so far as they are affected by changes in market prices, it is largely through estimates upon averages. Custom has much to do with wages demanded and paid, but profits are fluctuating constantly with the fluctuation of prices, with every change of methods affecting competition, with every introduction of improved machinery and with every accident of fortune.

No better illustration of this fact can be given than is familiar to every farmer in comparison of results from the work of different seasons. With the same outgo for

labor he may find the profits of two successive years wide apart. One year has granted the fortune of good crops with fair prices, while the other has yielded him a half crop when the prices of his product in the world are low. Possibly the improved machinery in wheat raising, applicable to the great farms of Minnesota, Dakota and California, has caused him to bring a costly product into close competition with a cheap one. Possibly, too, he has been tempted to excessive use of labor-saving machinery himself at too great cost for the transition, and it is more than probable that, stimulated by the high price of oats last year, he, with thousands of his neighbors, has made an extra crop of oats this year, to the actual destruction of the market. In all these cases the farmer himself suffers directly, while his hired hand is affected only indirectly by the unwillingness of farmers in some seasons to employ as much labor.

Profits offset by losses.— The actual profits in any enterprise are often overestimated by our failing to notice that all the waste of unthrifty undertakings comes practically out of the profits of the more thrifty. Wage-earners as a class are protected against losses by frequent settlements and by public sentiment. The losses of the unthrifty managers come out of the accumulations of previous thrift, or else are borne by the thrifty men who have trusted them. The bulk of bad debts in failure of any enterprise is for materials, machinery, etc., furnished by other producers. In great financial depression, the profit-makers bear the evil directly, while the wage-earners feel the effects in the lessened competition for their service.

CHAPTER XIX

CONFLICT BETWEEN WAGE-EARNERS AND PROFIT-MAKERS

The nature of the conflict.—The mutual interest of all whose energies are used in production, that the total product of wealth should be as great as possible, is often disturbed by doubt as to the fair division of what is produced. Under the modern factory system, the multitude sustain the relation of employés to a comparatively few employers. Antipathies are liable at any time to arise between these two classes of workers. Those who officially control wealth in great enterprises are subject to suspicion of unfair treatment of their less independent employés. Ignorance among the mass of laborers of the intricacies of business life contributes to such suspicion. In fact, the so-called conflict of capital and labor is a struggle for and against profits. Interest and rent are only indirectly involved in the question. The manager's profits may be assumed by both manager and wage-earners to arise from reduction of wages. The necessary reticence of business managers and the frequent arbitrary decisions as to wages help the wage-earner to feel that his interests conflict with those of his employer.

It is well for all to realize that this conflict, when

there is one, is not so much between the rich and the poor as between the struggler for profits and the struggler for wages. In many instances the true solution lies in the same direction, if both could see the facts alike. It is an acknowledged fact that generous wages make enlightened, energetic laborers, and that greater profits come in the long series of undertakings from the most intelligent service. A farm-hand at $20 a month is sometimes worth more than two at $15. On the other hand, if markets are low and profits decline, permanence of employment will depend upon a readiness of wage-earners to accept a new adjustment of wages to conditions. Everything which fosters a better understanding between profit-makers and wage-earners contributes to the welfare of both. Everything which hinders such understanding injures the welfare of both. The cost of such friction is borne by both parties. But in the long run, the wage-earners are liable to carry the larger part. Even the destruction of property by rust, decay, or even violence, comes back upon the wage-earners who might have been employed in its use, quite as truly as upon the manager whose profits and accumulations are wasted.

Obstacles to fair understanding.—The necessary ills connected with advancing civilization, in the laying aside of old methods for new, in the adoption of extensive machinery, and in the more perfect competition with the world, fall upon both profit-maker and wage-earner. The wage-earner feels the immediate loss of his usual opportunities. The profit-maker feels the weight of providing new machinery, devising new methods and taking the longer range of chances. All these ills are

met in time by intelligent and hopeful struggles for the best. In the worst conditions ever brought by improved machinery, a very few years have brought relief and improvement to the very class of laborers injured.

The danger is that wholesome competition upon a clear basis of fair understanding and free range of enterprise may be checked by legislation or organization for class purposes. Against the interests of the mass of the people are all extended franchises, giving arbitrary control for long periods of years over any industry; monopolies sustained by patent rights or protective duties; trusts, so far as they imply a combination of men to resist the law of supply and demand; and laws which in any way favor one class of people engaged in one kind of industry as opposed to any or every other.

Quite as prominent are those hindrances which come from every kind of fraud, including adulteration and misrepresentation of products, deception as to market conditions, false credit, and violence of every kind. The more perfect the light thrown upon all the conditions of production, the better the understanding which all men may have of a neighbor's welfare, and the easier it is to put ourselves in our neighbor's place.

Strikes.—The methods of warfare between wage-earners and profit-makers are quite generally understood under the names of strikes, boycotts and lockouts. The occasion for a strike, which means a sudden stopping of work by the employés of an establishment, is usually some question of immediate advantage to the workmen. A desire for increased wages, fewer or different hours of labor, or the removal of some restriction upon habits or

associations, gradually becomes general, and through some permanent or temporary organization united action is taken. Quite frequently a strike is occasioned by a sudden and apparently arbitrary reduction of wages, affecting a large body of men. Many strikes are inaugurated in the interests of discharged workmen, when the organization to which they belong is supposed to be interested.

Thus a strike is always a form of warfare, and should be entered upon only after the same careful consideration that makes war sometimes a necessity. Under ordinary circumstances and upon general principles, no body of workmen has any more right to suddenly stop work without notice than railway managers have to stop a daily milk train. The end to be secured must be important enough to humanity to overbalance the injury of the strike itself.

Since a strike is an effort to produce a corner in the labor market, it will succeed in the end sought only when conditions for cornering the market are favorable. Even then the loss to the entire community is considerable. The injury to property, while directly borne by the profit-makers, is widely distributed. First, all wages stop and wage-earners suffer. Second, ability to pay debts ceases and capital owners suffer. Third, insurance companies have their risks increased and all insurers suffer. Fourth, the market for the products is demoralized and all consumers suffer. Fifth, almost always social disorder results, police expenses are greatly increased, and all taxpayers suffer. Sixth, in the end the relation between employers and employed is more

strained and less free than before, so that all humanity suffers.

The chances of success, as indicated by the record of many years, are small, and apparent successes are often temporary. And yet the world recognizes the right of a body of laborers to strike, just as it recognizes the right of revolution to secure the general welfare. Formerly a combination of workmen in a strike was treated as a conspiracy and punished as such. Now the general rule is absolute freedom of combination with rigorous repression of fraud and violence. This enables any body of men to make a serious test of the conditions of a labor market, at the risk, primarily, of their own welfare, but with serious strain upon the general good. It leaves room for the possible breaking down of old customs, which are stronger than law, and it sometimes proves, like a war for liberty, a means of great enlightenment to those who take part in it. It is properly held as the last resort in the struggle for fair recognition of the rights and necessities of wage-earners.

It is noticeable that the tendency to strikes among the more skilled workmen is diminishing, and that the mass of communities are weighing their own interests more carefully as they see the general destructiveness of the method. At present strikes are expected among laborers of least skill, where they are, from usual conditions, least effective. Strikes are frequent among coal miners, where wages are liable to reach the lowest possible mark because of the ease of competition from all parts of the world, though the effect of such strikes

in bettering the condition of miners has scarcely been felt. The fact that destruction of property and the natural waste from strikes is so widely distributed among workmen and consumers retards popular sympathy, and the fact that strikes increase the risk of capital employed, and actually reduce the amount of capital in use, diminishes the chance of increasing wages or comfort in those employments where they are likely to occur. It seems evident that some better remedy for oppressive conditions of wage-earners must take the place of strikes.

The boycott.— The boycott is a comparatively recent device for enlarging the field of combat to include not only the employés of an establishment but the consumers of its products. This is especially applicable to those industries the products of which are largely consumed by wage-earners, whose sympathies can be depended upon to carry it out. It asks all sympathizers to refuse to purchase products from the employer or firm attacked. A great bakery, for instance, can easily be ruined by a boycott, if its customers are chiefly wage-earners. It is easily applied in cases where custom has allowed the use of a label from some organization of workers. It has been attempted with some success against a railroad so related to other roads as to require the services of sympathizers with its striking employés to carry its freight to final destination. An instance of its widest application is in an effort to persuade the people of a city to refuse to patronize the street-car system.

The warlike nature of this method is apparent in

the effort to use terror as one means of persuasion. In this case it uniformly overreaches itself in destroying public sympathy with the strikers. That it has a possible place in the struggle of wage-earners for their rights cannot be disputed, since it corresponds with the nature of a blockade or a siege in other warfare. But its nature as a method of warfare is equally clear, and its use in the interests of humanity belongs, with all war, as a last resort.

The lockout.— Lockout is a name given to a method employed by managers to prevent the continuance of a strike by aid of the sympathy of employés not directly interested. It often happens that a comparatively small body of workmen in a great factory strike for higher wages, and are sustained in their strike by the sympathy and support of other workmen in the same factory. Under these conditions the employer is tempted to stop all work by a sudden closing of all shops, that the pressure of suffering among a large body of wage-earners may force the smaller body to accept the old conditions. The lockout seldom gains a popular sympathy, for the reason that employers appear to be using this method of warfare from a superior position of power. And yet no one can dispute the general right of employers to control of their business. Such a sudden stopping of business without an attack by a strike or some similar provocation would be considered inhuman, and popular sympathy would be wholly with the laborers and consumers interested.

General evils of such conflicts. — The incidental effects of such violent opposition between profit-makers

and wage-earners are certainly detrimental to all interests. The great multitude of farmers throughout the country depend for welfare upon the body of people using farm products, and all the waste of power from enforced idleness of wage-earners, managers and machinery is shared by farmers through diminished power of the rest of the world as consumers. In only a few instances have strikes affected agriculture directly, partly because the relations of employer and employed are so largely personal; partly because the supply of agricultural laborers for the season is usually large; but chiefly because wage-earners upon farms in this country expect eventually to become themselves proprietors, and so no separate organization is probable. In some countries, however, where wage-earners in farming communities are a class by themselves, a strike has been the only method by which the barrier of custom and law, built up through many generations, could be broken. The great agricultural strike in England will always be remembered as having elevated the standard of labor and living in that country. It is to the interest of all farmers to cultivate a better understanding between employers and employed than can be maintained with any general expectation of strikes, boycotts, lockouts or similar warlike methods of settling fair wages.

Trades' unions.—The organizations known as trades' unions, in which the wage-earners in any particular kind of business unite for self-protection, have had a gradually widening influence upon the relation of managers to employés. Once they were characterized as "machinery by which 10 per cent of the working classes

combine to rob 90 per cent," because the advantage secured usually comes out of the consumers of products. But today reasonable doubts of the general advantage of a well-managed trades' union have disappeared. If once they seemed a conspiracy against society in general, they are now recognized as a part of the general progress in mutual recognition of rights and privileges. It seems right to expect from them still larger usefulness, with a clearer perception of their importance. It is evident that they contribute somewhat to general intelligence of their members, and so far as this is true they help toward greater efficiency. At the same time they help to maintain stability of employment and stability of other conditions surrounding labor.

A brief enumeration of ends they may serve directly will help to appreciate their importance. First, they can as truly estimate the market value of wages by gathering statistics from all parts of the country and from other countries as can any organization in commerce estimate the market value of produce. Second, they can serve as an employment bureau in furnishing information of places where work is wanted, thus equalizing the advantages as well as the burdens of their associates. Third, they can make more uniform and more satisfactory the customs in regard to the length of a day's work or privileges of any kind associated with the work as perquisites. Fourth, they can, if they will, find the true gradation of skill and of wages among workmen, so as to establish a natural line of advancement. Fifth, they rightly do, and can still further, serve for mutual support in cases of illness, and for pro-

tection of a community against fraud in pleas of poverty. Sixth, they may easily and properly, if they will, provide for insurance of character, both as men and as workmen, by issuing certificates, and under proper provision giving bonds, such as are required in many positions of trust. Seventh, they may extend their operations even to the taking of jobs that require a variety of work continuing through a period of time. Eighth, they can, under most favorable circumstances, undertake various stock enterprises, especially coöperative stores, thus securing an incentive to saving, and diminishing the spirit of antagonism against the profit-makers. Finally, though they have the best possible organization for a successful strike, if necessary, they can subordinate this disposition toward warfare to a broader machinery for fair consideration of all interests and for individual arbitration of rights.

Such organizations, under good management, win the respect of all, and find a recognition of their methods satisfactory, Farmers' clubs and granges, though far from reaching ideal efficiency, furnish suggestions of the general utility. Unfortunately, these organizations, having little if any basis of capital, have seldom been incorporated under the laws of the state. Could the powers and purposes of such organizations be established upon a basis of statute law, the range of their usefulness might be greatly increased. They might even sustain a method for enforcing in the courts the collection of wages, where the single wage-earner often accepts the half loaf in a compromise rather than meet the expense and loss of time involved in a law suit.

Certainly the establishment of legal relations between the trades' union and the state would give to it a character and stability most likely to promote all interests.

Federations of labor.—The so-called federations of labor, in which practically the only bond of union between individuals is the fact that all are wage-earners, have so far worked out but a small part of the problem involved in their existence. They have the advantage of uniting large numbers and a variety of interests; but they have the disadvantage of subordinating all other interests to the supposed conflict between employers and employed. Their tendency is almost certain toward lowering standards of efficiency, and attempting by class legislation to get the advantage of mere numbers.

It is almost impossible that the organization shall be kept out of the field of bargains in politics and contrivance for special legislation, demoralizing to the whole country. Too often the votes of members are made a bribe for securing certain favors. In the nature of the case, they sustain a body of officers whose chief business is in danger of becoming that of either political agitators or political bosses. The machinery of organization is liable to reduce the independence of individuals. The organization itself is liable to demand a personal subordination almost equivalent to military rule, and the badge of the society may mark a man as under direction of authority. Even in questions where the majority rule, the force of the federation requires the caucus principle of absolute adherence, even though the majority represents the weakest and least intelligent

part of the organization. The demoralizing effect of such methods, including wholesale trading of opinions, is liable to debase citizenship, and so to diminish the individual self-respect, which is the highest possible protection for laborers.

Courts of arbitration. — Arbitration between employers and employed, in cases of serious misunderstanding, has long been advocated as a wise means of settling differences. The obstacles to its general, voluntary adoption are considerable. Employers object because it involves the admission of an outsider as a judge of their business methods. The employés object because they fear the sympathy of arbitrators with the superior intelligence, wealth and power of employers. Yet there seems no good reason why a representative body of men, chosen for character and ability, should not be appealed to by both parties in a contest which has already broken up the natural relations of business. As has been shown, the whole community suffers in every interruption of production and trade, and so far the community has the right, and should have the legal privilege, of insisting upon the fairest and quickest means of settling the controversy. In far less important difficulties between individuals, society insists that either individual shall have the right to bring the other into court.

Society is waiting only to settle the best form of a court of arbitration for labor difficulties. The trend of popular judgment is in favor of a well-organized commission, having the dignity if not the authority of a supreme court. That such commissions have not gen-

erally come up to the ideal is due largely to political influence among leaders of organizations, so that the commissioners become the choice of a faction rather than of the people. It is conceivable that the functions of judges in a series of state courts may be so enlarged under carefully framed laws as to include the duty of arbitration in labor contests.

If the people are not yet ready for compulsory settlement of such questions, the time is surely coming, under the enormous aggregation of industries and the immense combination of employés, when the judgment of the people expressed in due form of law will control both employer and employé. The whole world is recognizing methods of arbitration as better than warfare. It will soon insist that these minor wars within the commonwealth shall cease.

Profit-sharing.— Some general system of preventing antipathy between profit-makers and wage-earners seems desirable. Certain interests are known to be mutual, and both employers and employed welcome any system by which those mutual interests can further the success of the business. Among the methods proposed, and sometimes successfully employed, the most prominent is profit-sharing. This implies on the part of employers after payment of current wages a distribution, at stated times, far enough apart to secure a fair average in the profit and loss account, of some portion of net profits among all the wage-earners. The per cent of net profits to be thus distributed is matter of agreement, and the basis of distribution is naturally the scale of wages accepted by the employés in their con-

tract for employment. The particular methods of applying these principles vary with circumstances, but in all cases depend upon the actual confidence of employés in their employers. The effects seem to be good, bad or indifferent, in proportion to the general intelligence and stability of the employés. With really skilled workmen, established in homes and feeling responsibility as citizens, profit-sharing stimulates to the highest energy. With weak and irresponsible wage-earners it is likely to bring waste and sometimes false notions in regard to wealth production.

The weakness of the whole system is the lack of provision for fairly sharing burdens in the constantly recurring periods of loss. If the employé's share of the profits is consumed upon comfort or luxury, he is even less prepared than without such profits to meet the loss of not only profits, but his wages, in times of depression. If these additional earnings shared as profits become an insurance to the wage-earner, a sort of reserve for sustenance and safety in the necessary times of weakness in any industry, they stimulate the best characteristics of saving and character-building, and cultivate a disposition to meet all emergencies in patience. It is quite customary, therefore, in any system of profit-sharing to provide also an investment for the employés in a reserve fund, from which the necessities of the business and the needs of the whole community of workers may be met. Such a method, if wisely managed, makes the interests of the employés coincide with those of the employer. If added to this there is ample opportunity for suggestions as to enlargement and im-

provement of the business in all minutiæ, the best abilities of the workmen are called out and the heartiest sympathy is possible. There still remains against such a system the objections, that losses are not shared as truly as profits, and that employés are liable to require too intimate an acquaintance with the condition of their employer's business to foster the success of the enterprise. Its successful application is so far confined to lines of business easily comprehended and direct in their methods.

Sliding scales of wages.—Another device for connecting directly with the fluctuations of business any compensation of wage-earners is called the sliding scale of wages. This is an attempt to make each sharer in production depend directly upon the price of products in the market for rate of wages. The wages of different workers are adjusted to each other by contract upon some ratio established by experience, and then the wages of each are made to vary from month to month with the average price of the finished product in the general market. This subjects all parties directly to the fluctuations of the business in both profit and loss. Its success is dependent upon the confidence placed by employés in the fairness of the adjustment. It stimulates to highest productiveness when prices are high, and checks production slightly when prices are low. But it provides no direct method for readjusting business under the pressure of great changes in methods of management, nor does it save from strong antipathy against the improvement of a business by labor-saving machinery. Its successful employment depends in general

upon the character and efficiency of employers and the general intelligence and enterprise of employés.

Coöperative industry.— Coöperative industries are sometimes advocated as a complete solution of labor difficulties. The system implies a union of independent workmen, all of whom shall be sharers in the capital employed as well as in the labor involved, including management. The management of the enterprise is entrusted to chosen members of the coöperative force, and wages or salaries are fixed according to abilities employed, essentially upon the scale of current wages outside the coöperative enterprise. All profits are then shared among all members of the association in proportion to their wages. But an investment of such profits in the growth of the business is an essential part of the plan.

This method satisfies the ideal of equity in division of wealth produced, provided the basis of adjustment between classes of wage-earners is accepted as fair. The principal difficulty in this respect arises in reference to the salary of managers and overseers. Such salaries are less clearly defined in the labor market, being usually complicated with profit-making, and are liable to be considered out of all proportion with the wages of other workers. If underestimated, the marked abilities required in management are likely to be withdrawn from the enterprise for independent management in profit-making.

The chief difficulties, however, with coöperative production grow from the want of confidence of the multitude of shareholders in their managers. Few kinds of

business can be carried on successfully under a body of absolute rules, and fewer still will bear the delays and hesitation required for a general consultation of many authorities. The comparatively few instances of genuine success in coöperative production are due, in the first place, to the comparative simplicity of the undertaking; and, in the second place, to the genius of some organizer, who has been willing to contribute his superior abilities for the sake of the enterprise itself rather than the compensation.

A few principles may be fairly drawn from the general experience. First, all shareholders must be actual workers, in some way responsible for a part of the production. Second, the influence of each shareholder must in some way be held in direct ratio to his share in the production. Third, the system of accounts must be such as all can fairly understand. Fourth, the management must be entrusted to a chosen few, whose interests are chiefly in the business itself, whose character secures the confidence of all, and whose administrative ability is not too much hampered by rules.

The opportunity for coöperative industry is nowhere greater than in a community of farmers. Butter and cheese factories, cold storage plants and milk stations invite the coöperation of interested farmers upon the simplest possible basis of agreement. The multiplication of such enterprises is desirable, and the farmers of every community may profitably study the conditions of success. The greatest obstacle heretofore, has been the want of competent management, and the distrust aroused and maintained by the inefficiency

and fraud of managers. It is possible, too, that farmers generally do not recognize the actual importance of executive abilities, and are unwilling to pay the salary actually earned by a thoroughly competent man.

Legal restrictions as to labor.—It is natural for those who suffer in the struggle for better wages to seek the support of law in restrictions upon contracts as to wages, hours of employment and conditions of comfort. The principle that governments must protect the weak against the strong in any community is a thoroughly established one. Yet its applications are subject to continual readjustment. Multitudes of experiments have been tried, affecting the whole range of inequalities in wages and perquisites. In many instances, wages have been fixed by law, and that for long periods of time, but without relieving in any respect the actual force of competition among wage-earners themselves. Indeed, the tendency of very explicit enactments is to weaken the individual ability of wage-earners by destroying ambition. Wages fixed by law are necessarily as low as the average would be in a free competition; otherwise production is hindered and capital is diminished. With this low average any worker of more than average ability gains nothing by exerting his ability, but does gain ease by neglect. Thus enforced uniformity reduces the energy of the producing forces and practically closes the doors of advancement from wage-earning to profit-making.

A similar effect is found in efforts to regulate the hours of labor by law, except where the law simply defines the meaning of a day's work or emphasizes the im-

portance of public health and vitality rather than equality in distribution. Humanity has done much in reducing hours of toil, and may yet do more; but it will be for humanity's welfare in larger considerations than are measured by money. The eight-hour question, so constantly agitated in certain callings, concerns the entire people just so far,—and no farther,—as the general health and energy of the community depend upon it. Farming communities stand aloof from its application; and yet there is no question that the farmer's home might be even better than it is for developing physical and mental vigor, if hours of toil were more carefully restricted to meet the conditions of healthful growth and activity.

Other conditions, affecting the employment of children and women, are proper subjects of restriction by law; for these also involve the consideration of general welfare in the elevation of the physical, mental and moral characteristics of the race. Upon the same plane must be put all legal restrictions upon methods and machinery, reducing the dangers from accident and promoting the comfort of employés. All restrictions serve their purpose only so long as they are appreciated as having their reason for existence in general welfare. The rights of an employer, under contract with his employé, like the rights of a parent in control of his child, are subject to the law of good will; and the world will yet find a way to make its restrictions felt wherever recklessness or carelessness or greed destroys good will.

Nationalization of industry.—A somewhat popular

suggestion in solution of labor difficulties is the so-called nationalization of industry. This, in general terms, is a proposition to equalize compensation and avoid fluctuation in both wages and employment by public control of all industries under official management. While this involves some principles of socialism, more properly discussed in connection with consumption of wealth, its relations to productive industry may be briefly presented here. The plans proposed are as yet expressed only in most general terms. Even the method of bringing about such a revolution of thought, feeling and action has not been devised. Still less ready is anyone to point out the details of a plan for the actual production. The nearest associated ideas are found in governmental services through a post office department or the management of a system of transportation. Most advocates of the method overlook the fact that in such government administration of partial industries the law of competition is still operative between these enterprises and the universal industry of the people.

The difficulties in governmental management under present conditions are anything but small, especially under popular rule, where the dominion of party and the influence of position are all-powerful. Under monarchial rule the organization of such industries becomes like that of an army, in which arbitrary power predominates. It seems easy to see that any effort to solve the problems of labor employment by national control involves finally the arbitrary decision of power, in adjustment of both duties and compensation. The management by officials, however those officials are ap-

pointed, is not necessarily wiser, more efficient or more benevolent than the management by interested men, whose life is in natural contact, through business relations, with employés. Those who have had experience with official control under popular government are not likely to expect a readjustment of all interests from the standpoint of politicians to be marked by either universal good will or universal common sense. It is reasonable to suppose that wherever general welfare in actual use of wealth can be best promoted by public control, such control will come through the free exercise of individual judgment with reference to the work in hand. While there ought to be no objection on the part of any to a government enterprise which can be shown to serve in that way the greatest good of all, nobody ought to assume that the nationalization of industries is for the greatest good. Each great undertaking will require its own proof, not only of the welfare to be expected, but of the practical means by which that end can be secured.

The spirit of equity chief.—The trend of experience goes to show that true economic interests, not only of the community but of individuals, are in accord with general principles of welfare. It seems certain that communities paying the highest wages are those which gain the highest return for labor in product, and maintain the highest general rates of profit. In general, also, those enterprises which are controlled with most care for equity in wages and for the general welfare of employés are most stable under fluctuations of business and most genuinely successful. While wealth may be

accumulated unjustly in the hands of those who oppress their neighbors, there can be no doubt that in long periods of time the best adjustment of all interests gives not only the truest welfare but the largest wealth and the best use of it. The spirit of equity must eventually control both managers and wage-earners, and no other disposition can furnish a final solution of the problems of distribution between employers and employed. If employers are greedy, the wrong will not be righted by an equal display of greed on the part of wage-earners. The spirit of true philanthropy is the only proper spirit for discussion of these questions.

CHAPTER XX

PROCEEDS OF CAPITAL: INTEREST AND RENT

Practical distinctions.— The terms interest and rent are distinguished in actual practice by the fact that interest is paid for the use of capital in some circulating form, while rent is paid for the use of fixed capital. One who borrows anything, expecting to return not the thing itself but its equivalent in value, is said to borrow upon interest. One who borrows the same thing, expecting to return the identical thing, is said to pay rent for its use. Thus interest is paid for control of circulating capital until an equivalent is returned, and rent is paid for control of fixed capital until the same articles are returned in prime condition. A farmer who borrows a mowing machine from the warehouse, giving his note for its value, pays, when he returns that value at the end of the year, interest upon his note. If he borrows the same machine from his neighbor under contract to return the machine in good condition at the end of the season, he pays rent for its use. The young man who borrows his neighbor's farm, expecting at the end of five years to make that farm his own, gives a mortgage note, promising at the end of five years to return an equivalent value for the farm, with annual interest. If, on the contrary, he expects to return the farm itself

at the end of five years, without reduction in value, he makes a lease, embodying this agreement, with annual rent for use of the farm.

Both interest and rent are liable to involve the element of risk as to the proper return of the valuable thing promised, and to that extent they partake of the nature of profits. The true interest and rent are independent of the possible risk, and have to do simply with the advantage naturally accruing to the possessor of wealth from its use as capital, and forming one of the chief reasons for accumulating wealth at all.

In technical discussion the term rent is usually confined to the compensation secured from appropriation of space, peculiar location, natural fertility, mineral deposits, water privileges, or any natural advantage to be used in production. In this limited meaning rent is confined to the advantage gained by the owner of wealth in any form so affected by the law of supply and demand as to gain a scarcity value. The term unearned increment,—meaning an increase of value without cost of exertion,—has been largely applied to such cases, and illustrations are taken chiefly from the ownership of land and similar natural forces. The same unearned increment, however, accrues to the possessor of any article of value or any personal attainment, which through increasing wants of the community becomes, on that account alone, more valuable in market. Thus a bin full of wheat, saved from a year of plenty to a year of scarcity, has gained a value abnormal,—that is, from the fact of its scarcity. Yet no one would think of applying the term rent in such a case, because the foresight which

stored the grain gains its compensation in profits. If the same kind of foresight has plotted a city upon wild lands, and held a portion of those plotted lots until a crowded population competes for their use, such wealth is said to be gained upon the principle of rent. The difference seems to be chiefly in the greater permanence and the gradual advancement of the profits secured.

The every-day operations of a farming community illustrate both interest and rent in all their complications and definitions. Every farmer, in estimating the cost of his wheat crop, may properly calculate both the interest on his capital invested in tools, teams, machinery and wages, and the rent of his land, keeping distinct accounts of interest and rent; or he may combine in one account as interest the use of capital in machinery and land. If he owns the whole establishment, he is likely to combine both interest and rent with the return for his foresight and energy in managing the farm under the name profits. All these returns, however, come for different reasons, though under the same general principle of values expressed in the law of supply and demand. The farmer working a rented farm and the one working a mortgaged farm are alike paying both rent and interest, since every farm involves both the wealth accumulated by exertion and the wealth advanced by increasing population. While the owner of the mortgaged farm apparently pays interest, if at the end of the term of the mortgage the farm is returned to its former owner by foreclosure, the result is that the mortgagee, while nominally owner of the land, has simply been a renter. In a fair settlement of equities he will have paid

for the use of the land he has cultivated. Interest and rent are thus seen to be terms separated rather by peculiarities of application than by difference of principle. It is proper, however, to treat them separately for the sake of more perfect understanding of the conditions applicable to each.

CHAPTER XXI

PRINCIPLES OF INTEREST

Reasons for interest. — The propriety of interest under any circumstances has often been questioned, and its rightfulness is still bitterly disputed. Both church and state have at times denounced the receiving of interest as criminal. Yet in actual practice of commercial life throughout the world interest has been sustained in all ages. The Jewish law prohibited interest between neighbors, where the reason for borrowing was assumed to be poverty, but authorized it in dealings with foreigners, where the transaction was assumed to be in trade. The principle upon which interest in all productive industry is actually founded is that capital, gained by exertion and saved by self-control, secures to its present possessor such advantages of time and choice of use for his abilities as can be given by nothing else. In the study of production we have seen that time-saving is an important result of capital in its various forms. A carpenter's kit of tools represents a value in use equal at least to the time he might consume in making them. He can afford to keep them for another's use only while they bring to him the advantage of that time-saving. His neighbor is willing to secure him in that advantage by paying him for the use of the

tools all, or nearly all, that he gains by using tools over what he would have without them. The borrower will still be the gainer by opportunity to do work not possible without the tools. The bargain between borrower and lender, like any bargain, is a fair one only when both are benefited. The limits of fairness in the deal are naturally reached when a clear understanding of all conditions is had in open market. Neither borrower nor lender can take advantage of the other without fraud. Neither is under obligation to give to the other without an equivalent. The whole question rests upon service rendered, as truly as in any other bargain.

A large proportion of the opposition to interest arises from a misconception of the phrase, "borrowed money." The fact is that borrowing and lending have to do chiefly with other forms of wealth. Most notes are given for the transfer of all sorts of property under a promise to return equal value in the future. Money may not enter into the transaction at all, except as the standard of value is in terms of money. Even when money is exchanged for a note, the borrower hastens to part with the money for the tools or provisions which make him a profitable producer. In payment of his note he offers money again, simply because it commands every desirable form of value for the owner of the wealth. If a farmer wants a wagon without the present means to buy, he offers the dealer his promise to pay after six months, when the corn crop just planted shall have matured. If the dealer cannot afford to hold the note because he needs the capital in his business, that others may be supplied with wagons, either the farmer

or the dealer carries the note to some one who *can* afford to wait for returns, which may be either a banker, whose business provides just such accommodation, or a neighboring farmer who has just sold his wool. In either case, the first farmer borrows what he wants in carrying on his business, and at the end of six months, through a similar transaction of finding some one ready to take his product, pays his note with corn. (See p. 164.)

Interest is never confined to money transactions, nor even to those in which terms of money are used. All owners of productive wealth gain interest in its use as truly as in lending it. The farmer is not a money-lender in general, because his wealth will bring him larger profit by its use as stock or machinery. Even when he borrows from his neighbors, it is possible that he secures a larger interest, though he calls it profit, than he pays the lender. Interest is often paid in kind. The laughable story of borrowing a hen from one neighbor and a sitting of eggs from another, to be returned after a time with advantage, is actually paralleled by some transactions. A friend of mine having a magnificent pasture agreed with his neighbor, who owned a fine flock of ewes, to pasture that flock for three years, returning at the end of that time just twice the number of sheep received. He explained to me that he had made a great bargain, since the wool would pay for the use of the pasture, and he should have at the end of the three years a flock about equal to the flock he returned. This bargain involved interest at the rate of $33\frac{1}{3}$ per cent, without any terms of money, and an indefinite profit to the owner of the pasture in

addition to an average price for such use. This profit is his return for the risk undertaken; since he promised to double the flock under any circumstances, and if foot-rot or scab had ruined the flock under his management, he would still have the same obligation toward the owner.

Such bargains will always be made so long as both parties are benefited, for no possible construction of laws and no diatribes of fanatics can prevent them. Any calculation as to the enormous growth of wealth by interest is more than balanced by a similar calculation of the multiplication of wealth by production. If Abraham's shekels at compound interest make an impossible sum of money, Abraham's flock of sheep with the ordinary rate of increase makes an equally impossible worldful.

Varying rates of interest.— Interest rates are subject to fluctuation and variations under the natural relations of borrowers and lenders very much as are prices of commodities. Variations, in comparison of different regions, are due to several causes. In any community where enterprise is great and industrial forces are unusually productive, the interest rates are high as compared with another community with few competitors in industrial enterprise and less productive forces. Thus in countries having new land producing large crops with moderate exertion and an increasing population ready to put in such crops, the return for the use of capital in provisions, stock and machinery is great, and the lender gets high rates of interest. If, added to this apparent productiveness, there are risks of failure from

droughts, storms and injurious insects, the bargain is more favorable to the lender in expressed terms, though it may be less favorable in actual results. Thus risk enters practically into calculations of interest, whatever the circumstances.

Interest varies in the same region with a variation of energy and productive enterprise or of the speculative spirit undertaking great improvements, and on the other hand with any change of circumstances affecting universal credit. Distrust on the part of anybody reduces the readiness with which borrowers find lenders. In times of widespread lack of confidence, when all credit becomes debt, the borrower is likely to offer unusual rates of interest. And the few who are willing to lend at all expect enormous profits in such interest.

Similar variations in rates of interest are found between different classes of borrowers, due to the variation of risk. Thus promises to pay on demand, with personal security of two good paymasters, will usually be accepted at very low rates of interest, since the owner of wealth so loaned feels sure of having the wealth when he wants it. Government loans in times of peace and prosperity being essentially without risk, approach very near the same low rate of interest, since the owner of these securities believes himself at any time able to command the use of his wealth for any purpose by a transfer of these securities. If for any reason, official or legislative, public confidence is disturbed, rates of interest on such securities rise proportionally through the sale at a discount. Even a law prohibiting such sale would have exactly the contrary

effect to that intended, because of creating additional distrust. Loans upon time, if secured by productive landed estate not subject to unusual risks, can usually be made at moderate rates, and form a fair basis for judging the normal interest in any region. Loans secured by chattel mortgage bring higher rates, because the chattels involved are a less certain means of payment than landed estate. Loans secured upon unproductive lands, whether in prospective farms or city lots, are made at high rates, not only because these lands fail to furnish in themselves the means of interest payment, but because they represent the speculative energy of their owners with unmeasured risk. All these variations and fluctuations are found in every community, and grow out of the natural wants of borrowers and the natural feelings of lenders. Custom may have something to do with rates in special cases, as it has to do with wages and retail prices, but in the range of frequent dealing between borrowers and lenders rates follow the higgling of the market as truly as prices of commodities.

Usury laws.—It has been the custom for ages to distinguish between interest and usury, interest being supposed to be a fair payment for use of borrowed wealth and usury a larger payment in the distress of a borrower. Usury once meant only use, the equivalent of interest, but since it was once prohibited by law in England, the name is now attached to what is still prohibited by law, an interest above a definite rate prescribed by statute. The object of such legal restrictions is evidently protection of the borrower against

extortion. Yet it is practically proved by experience of the world that such restrictions operate against the borrower by limiting lenders in open market and sometimes closing the market entirely. The would-be borrower, under adverse conditions in the market, is obliged to find in some byway a lender whose scruples against infringement upon the law may be overcome by extra payment. Under such circumstances there is no market rate, and borrowers bind themselves in numerous ways to special payments not in direct conflict with the letter of the law. Evasions of restrictions under such circumstances are inevitable. A farmer buys a hundred-dollar horse, giving a note, payable in one year without interest, for $120; or he sells his note to a neighbor at what he will give; or he goes to a broker and pays him a commission for securing a loan at the legal rate of interest. Even at a bank, prohibited by law from taking more than the legal discount on the pain of losing its charter, a borrower may give his note for $500, tacitly agreeing to leave on deposit a fifth of the sum, thus paying interest on $500 for the use of $400.

All these forms of evasion are easily adopted with very little possibility of conviction, even when usury is charged. Even in the most flagrant violation of laws the chances of conviction are greatly restricted by the fact that a prosecuting witness, who, after making a contract in violation of law, takes advantage of that law to violate his contract, destroys all credit for himself, and so comes under the ban of society. The best methods of public restriction against extortion of any

kind in interest, in rent or in prices of commodities are those that provide for publicity of contracts. Where no legal restrictions upon rates of interest are fixed, current rates are much more likely to be public and widely advertised, and extortion is less possible than where the law encourages secret contracts by the need of evasion. It is quite possible that society will find a way of securing against the extortion of pawn-shops and secret brokerage by a public organization competing honestly for the same patronage. Such companies have been organized in a few cities with success in meeting the wants of the distressed, under such restrictions of charter and management as insure fair dealing. It seems as possible to regulate such matters by license and inspection as it is to control the hackmen of a whole city

Loan associations.—It is proper in this connection to refer to loan associations, the growth of recent years. The purpose of such associations is direct coöperation in borrowing and lending among neighbors similarly situated as to property. They are especially adapted to assist wage-earners in securing comfortable homes, for which they can pay gradually from their earnings. The system, however, has been widely extended, to the advantage of different classes of property owners, even to the establishment of coöperative banks among farmers. The essentials to success and safety in such associations are, first, that they shall be strictly local, confined to territory within which mutual acquaintance can give a fair basis for genuine credit; second, the objects sought by individual borrowers must be fairly equal in

risk as well as in ends to be served; third, the management must be thoroughly trustworthy, with a genuine interest of all shareholders in the selection of officers; fourth, all shareholders should have similar relations to the association as both borrowers and lenders, and each shareholder's responsibility should cease at the final settlement of his obligation; fifth, provision should be made for frequent auditing of accounts, official reports and inspection.

Uses of interest.— In closing the subject of interest, it is well to recall the fact that interest exists in the very nature of productive energies, and that ability to transfer the use of property in any form of capital without transferring the interest is most useful to society. It sustains the aged, who must otherwise be wholly dependent, and the childhood of the race in all development of body, mind and soul. Interest sustains the mass of educational and charitable institutions, as well as the individual life of multitudes whose present earnings could not keep body and soul together. Moreover, the possibility of paying interest secures to the enterprising young men of the world the opportunity to make their highest energies productive. Thus the matter of interest pervades the thrift of society as well as the sustenance, and cultivates everywhere that present economy which provides for the rainy day. The fact that nearly one-fifteenth of the population of the United States are depositors in savings banks alone proves the extent and importance of interest to the general welfare. With added facilities for depositing small savings in postal savings banks, the advantage would be still more widely

felt, and the general economy in the use of both earnings and capital would be promoted. All this extension of interest-bearing increases the tendency everywhere noticed to a diminution of current rates. With a multiplication of capital in any community, the rates of wages increase, while the rates of interest diminish. Both tendencies are natural effects of the same cause.

CHAPTER XXII

PRINCIPLES OF LAND RENT

Rent values of land.—The general character of rent, as connected with the use of fixed capital and so associated with interest, has already been touched upon. In that sense it depends upon the fact that possession of wealth is universally an advantage in production of future wealth and is subject to all the peculiarities affecting interest. But land rent, as represented in the value of farms, city lots, mineral claims, fisheries, water privileges, wharves, etc., has peculiarities of its own. Its connection directly with rural wealth in the value of farm lands makes it of special importance in this discussion. While rent, as such, is comparatively unimportant to farming interests in the United States, where most of the land is worked by its owners, the principle is involved as fully in the transfer value of farms as it is in countries where land is almost universally rented for farm purposes, like England and Ireland. It is simply necessary to remember that the rent question in such a country as England, where land is seldom transferred from owner to owner (but all values are expressed in the terms of annual rental), is quite different in form from the question in our country, where transfer of landed property is free and common, and the rental is regulated

largely by current rates of interest upon land values. In England, too, the rent question involves long standing relations between the people and landed proprietors who, for generation after generation, have been rulers of the people as well as landlords, and are still the natural magistrates over the renters upon their estates. Yet the principal occasion for rents in such countries is exactly the same as that for varying values of land in the United States. Peculiar intricacies of methods of rent-paying and of terms in leases, varying with the customs of different countries, have little importance in the United States, except for comparisons.

The United States afford superior advantages for the study of land values fairly independent of restrictive laws or customs. The rapid settlement of wild lands by farmers and the rapid building of cities under free competition give the fairest illustration of tendencies in land values to be found in the world. The fact that the government for the past fifty years has encouraged the settlement of new land at the bare cost of establishing ownership makes the problem almost as simple as if the government had no voice in the distribution.

It may be proper to recall the conditions under which any individual has been able to secure the absolute control of land as a proprietor: First, by preëmption, involving temporary residence until the land is purchased and patented, at the nominal price of $1.25 an acre, or $2.50 within ten miles of such railroads as may have been subsidized by a gift of one-half the land within the same limits. Second, by homestead preëmption, by which any head of a family, present or

prospective, can secure 160 acres of land by payment of certain registration fees, amounting in all to less than $20 upon the average, and making his residence upon the land for a period of five years. The issue of a patent at the end of the five years establishes ownership. The soldier's homestead, offered to those who had served as volunteers in the army of the nation, varied from this only in a reduced term of residence. Third, homesteaders, as well as others, could secure additional lands under a provision for tree culture on the treeless prairies, the requirement being the planting of a few acres of trees and the maintenance of culture on those acres for a period of eight years. Even the establishment of trees in permanent growth was not a requisite. Fourth, by certain outlay for irrigation purposes in arid lands a tract of 640 acres could be secured. In addition to these, certain land grants to the several states led to the issue of scrip, entitling the possessor to locate on government lands upon payment of only fees of registration. Certain states, within whose borders public lands did not exist, being unable to hold lands in other states or territories, sold scrip at less than half the price asked by the government for lands.

All these methods operated not only as a stimulant to the settlement of new territory, but as a check upon rising values of land in the older communities. Nevertheless, this rapid development has given the best of opportunities for watching the tendencies of land values.

Propriety of land rent.—The right of property in land, like every other property right, rests upon its

advantage in the welfare of communities. Among savage tribes individual control of plots of ground would interfere with welfare, as hindering the only use to which the land is put in hunting. Among people living by herding no nice dividing lines are needed, though strife between herdsmen, since the days of Abraham and Lot, results from the mingling of herds upon the same feeding grounds. With the actual tillage of soil, control of the space tilled becomes absolutely necessary, and more necessary with every improvement in agriculture which takes the nature of permanent improvement upon the soil. No agriculture beyond the merest skinning of the surface has ever existed without permanent occupation. Even where the land is distinctly owned, but used under temporary leases, few permanent improvements in agriculture are possible.

The necessary permanence of control over the products of toil makes an essentially permanent control of land necessary to the common welfare. For this reason the progress of civilization everywhere demands more distinct boundaries of landed property, and this in the interest of the whole community, which shares in the progress. The more intensive and far-seeing the methods of farming become, the greater the necessity for fixed boundaries. This necessity is recognized in all provisions for exact surveys, complete records of transfers in ownership, and finally for government guaranty of title. Such ownership underlies all prudential consumption of wealth for future returns. The loss to communities from want of it is seen in the waste

of game in unappropriated countries and the destruction of the seals in the seal fisheries. Yet this ownership is still subject under all circumstances to the law of welfare for the entire community. The community's right of eminent domain has always been recognized in the need of public highways and other public improvements, and is likely to be still further recognized with any new necessity, like the control of injurious insects or quarantine against disease. Yet none of these restrictions diminish the necessity of ownership, in the sense of individual control for all purposes of agriculture, manufactures, commerce and social relations. This individual control is intimately connected with our ideas of rent, and would be still, though all the lands were managed under one proprietorship, and that a public one. Rent would accrue and be paid, though the whole people held title to the land.

The sources of land values.—The value of land, like every other value, is the result of comparisons. Whatever advantage is given to a producer by his possession of land is likely to form his estimate of its value. In the comparison of two farms of equal dimensions every difference in fertility, location as to drainage, exposure, or convenience to market or social advantages, adaptability to improved methods in agriculture and convenience of arrangement, will enter into the estimate of worth. If one of the farms can be had for the asking, the other will be worth just what its advantages will add to the power of the owner in the production of wealth, provided both are considered alike as simply machines for producing food. Usually, how-

ever, economy in the consumption of wealth is considered also. In a new country lands most easily accessible and readily tillable are chosen first. With added demand for food, less accessible or less easily tillable lands are occupied. At once the more accessible have a value equal to the greater ease with which the same product can be offered in market. If the difference were only a mile of hauling all produce and all commodities for which produce is exchanged, that cost of transportation would make the value of the nearest land. If the difference is simply in yield for a given amount of labor, the land which yields thirty bushels of wheat to the acre, when land which yields twenty bushels can be had for the taking, will be worth ten bushels of wheat a year, and its value will be estimated in dollars at a sum which securely at interest will bring a similar return. If, by and by, the demand for food or improvement in transportation or an easier method makes it worth while to cultivate land yielding only ten bushels of wheat to the acre, the annual value of land yielding twenty bushels will be ten bushels, and that of the land yielding thirty bushels will have become twenty bushels.

Thus the rent, and correspondingly the value of farms, increases with the increasing demand for farm products, whether that demand results from the increased number of eaters at hand, from the increased ability of these eaters to supply their wants, or from ready transportation to eaters elsewhere. Many influences in various directions affect the tendency to an increase of land values with the increase of population. Some have been led to the assumption that only the multi-

plication of food-eaters, increasing the need for land, makes rent possible. Connecting it with the theory of Malthus that population tends to increase in geometrical ratio, while food can increase only in arithmetical ratio, they have denounced rent as a price paid to monopolists under stress of danger from starvation. These forget that rent is payable as truly out of increasing abilities of individuals to meet increasing wants as under the spur of more distressing wants. Indeed, starvation, or the approach to it, never pays rent, however strong an incentive it may be to promise rent.

Rent in price of products.— Does the value of the land upon which my wheat is raised enter into the price of my wheat? If all land values were destroyed, would the wheat of the world be cheaper, because its cost would be diminished? The price at any time is just enough to bring the supply to market and keep it there. A portion of the supply has cost even more than it brings to its owner. If any brings more than cost, the difference goes either to the energetic raiser using improved methods, or to the fortunate receiver of timely showers, or to the possessor of the fruitful field. Neither the profit of the raiser, through his method and the shower, nor the rent of the fertile field has made a bushel of wheat less or more valuable in market. The value of the wheat in the market makes both the profit and the rent. If the value of wheat falls, the value of best wheat lands sometimes follows; but land values do not directly affect prices of products, though they may be directly dependent upon those prices.

Indirectly, however, the value of land may affect

prices of products. Land, in certain speculative movements of society, gains a value for future use. If the fertile fields are held for speculative purposes, less fertile fields must furnish a limited supply at increased price. If the fields are wanted for homes, the supply must come from a distance at greater cost, or be raised on fewer acres by more costly tillage, and will not come till the price is increased. Thus high rents, or land values, if maintained by outward forces may diminish the total product, and so affect prices. But no conspiracy of land holders can affect the price of their products so long as their lands are employed in supplying the market.

Variation in land values.— Rents vary in different countries under various customs of those countries, and so land values can be compared only by knowing the customs and laws which influence the transfer of landed property, either by deed or by lease. Differences in value are often due to considerations entirely distinct from production. Farms are homes as well as machines; and the privileges of home life, with all the relations of family, friendship and patriotic associations, may rouse competition that greatly influences the market value of farms. In any community, whatever custom or law hinders competition in farming affects the relative value of farms in productive industry. Peculiarities in the method of holding lands have much to do with their value. The hopes and expectations of the people have large influence. Whatever stimulates enterprise and increases speculative energy enlarges the estimate of land value. Whatever depreciates abilities or discourages enterprise diminishes land value. Whatever encourages

permanent improvements and far-sighted plans in farming increases land prices. Whatever discourages the spirit of improvement reduces such prices.

In some of these ways it is possible to account for great differences of value in regions apparently equal in natural advantages. Thus nobody wants lands in Turkey, however fertile, in comparison with lands in a free country like ours. Countries under a poor system of agriculture with inefficient labor cannot maintain high value of land. Ignorance and thriftlessness in a community of laborers operates in the same way. Thus the habits of the people, as well as their laws, enter into the question of rent. In countries where large estates are parceled out to renters, generation after generation, the customary terms of leases as to time, method of payment, adjustment of improvements, restrictions as to methods of tillage, and requirement of capital, enter largely into the question of rents. In some the fear of eviction under arrearages cuts a prominent figure; in others the confiscation of improvements destroys all enterprise. Upon the continent of Europe, in some places, the payment of rent in produce,—what we call working of land upon shares,—greatly limits individual enterprise, though it gives to the land owner a direct control in the methods employed on the land. Restrictions of law or of custom upon transfer of ownership always have the effect of diminishing the general productiveness by hindering the natural competition of productive enterprise. The result of all laws of entail, by which enormous estates are held from generation to generation under control of the same family, is universally deprecated because of its interfer-

ence with the natural law of supply and demand as to farms and homes. All such restrictions favor the spirit of monopoly and cultivate arbitrary power, which in every way hinders progress.

Recent decrease of land values.—In the United States during recent years there has been a decided shrinkage of land values in most of the country. Several evident causes appear worthy of mention. The most evident is a rapid increase of farms on the western plains, recently bringing their products into the competition. These prairie regions give the largest range for farming in the world. In the same connection is the introduction, upon these immense fields of cheap land, of extensive machinery by which the productive power of labor is multiplied. The labor of one man for 300 days is said to have produced in California 5,000 bushels of wheat, so that one man's labor on many acres gives to each of 1,000 people a barrel of flour a year. Next to this is the opening of new agricultural enterprises in South America, Australia, India and South Africa, with still greater prospects in Siberia—all the result of great improvements in transportation, opening to these regions the world's great markets. This has pushed the supply of staple products toward the condition of over-production. The same cause has diminished the demand for our staples by greatly stimulating the consumption of foreign fruits and nuts. Most recently has come the depression from loss of confidence in enterprise, through excessive speculation and waste of capital, undermining the market for land as well as for all the machinery of production. In these conditions the whole world has shared.

Population drifting to cities.—The drift of farm population toward the cities is a symptom of the changed conditions, not a cause. If, as decided by an expert investigator, three men on a farm do the work that fourteen did forty years ago, the farms can well spare to the cities an increasing number of its boys and girls. The drift is real and permanent, diminishing rural population in 100 years from 96 per cent of the whole to 70 per cent, though exaggerated in figures through arbitrary division between towns and cities. This movement has been noticed the world over since 1848, when machinery began to affect agricultural production.

That this drift is wholesome is evident, if we look at the diversity of employment resulting and the improved welfare of all. A simple comparison of figures from the United States census will show the readjustment of employment. No one can doubt the advantage gained in the entire nation.

Abandoned farms.—The most disturbing feature of this readjustment is the desertion of some farms in the rougher parts of New England and the drier parts of the West. These lands will find a profitable use in the woodlots through the East, and in grazing ranges through the West, with slight permanent loss. They are not signs of poverty, but of a developing thrift, just as the abandoned country woolen mills tell the story of immense growth in the factory methods. While individuals seeking profit in sale or rent of their farms may suffer in any such shrinkage of local values, it must not be forgotten that the total of rural welfare is not necessarily diminished. Land values, aside from improve-

ments, are everywhere evidence of limitations to welfare in some special direction. If human enterprise and invention and thrift lessen such limitations, the world is better off.

The great mass of farmers, who think more of their homes than of property, will suffer little from lower prices of land unless such low prices result from a general lack of thrift and of adaptation to new circumstances. While the changes in price which affect reduction of rent values do require readjustment of plans and methods, the farmer who keeps in touch with the world's work will not suffer, but gain, in the general advancement. In many instances, the low condition of farm property is due to unthrifty neglect of farmers in whole neighborhoods. Bad roads, short schools, weak fences and poor stock are as often a cause as an effect of low prices of land. Whole regions in our country suffer in this way from unthrift, whatever the price of farm products or of lands.

Farms in the United States.—These are under conditions best suited to attend the general thrift of the world in every way. Ownership is not complicated in any way with magisterial duties or prestige or entailment, as in England. It is not so distinctly hereditary as to embarrass agriculture by extreme subdivision of farms, as in France and other portions of Europe. It is in no danger of combination into great estates under absentee landlords, as in Ireland. Its laws of transfer and guaranty are growing more and more simple and direct, while protection to homestead rights is strong. Farmers themselves have such responsibility in state and na-

tion as to make their genuine interests felt everywhere, and no system of caste can make them a peasantry, as in most of the Old World. Indeed, the farmer in every region makes his farm; and the enterprising, educated farmer of the next generation in our country will find in himself the forces at work to give value to his land. The speculative movement in land holding will be outgrown when genuine farm homes are more prized for their welfare than for their wealth; but this very welfare will maintain a stable value in lands.

PART III

Consumption of Wealth

CHAPTER XXIII

WEALTH USED BY INDIVIDUALS

Wealth to be consumed for welfare.— The only economic motive for the accumulation of wealth is its use in promotion of welfare. While the old maxim says, "A penny saved is worth two gained," every one recognizes the penny as absolutely worthless except in view of some utility to be gained in spending it. So with every form of wealth. All economic value disappears when the thought of use is wanting. Such use, whether practically instantaneous, like the destruction of the gunpowder projecting the bullet, or extended through hundreds of years, as in the wearing out of a castle, or a bridge, is properly called consumption of wealth.

A majority of the great problems concerning social welfare are connected with the use of wealth, and therefore fall under the discussion of consumption. Indeed, so long as there is little accumulated wealth, as in the savage state, social problems have little significance. The statement of the Apostle Paul, "The love of money

is the root of all evil," while not confined in application to wealth already accumulated, has its most important bearing in the fact that wealth accumulated is itself a power to be used or abused by whoever controls it. The saying of Emerson, " The best political economy is care and culture of men," applies most strictly to the uses of wealth and the methods of its consumption. The great question of today in every civilized land is, How can the accumulations of power in the shape of wealth made by this generation be used to establish a continuous welfare, not only for this generation, but for its successors? The wants of society today include not only a reasonable provision for life and health and wisdom and virtue during the life of those who are now active, but an equal provision for the same wants increased with each succeeding generation. In all thought of consuming wealth, we must remember that power in this form is rightly used only when power in some other form results. Thus wealth is consumed, according to natural laws, either for reproducing itself in more advantageous form or for sustaining human power in form of health or wisdom or virtue.

We have social welfare as the result of wealth consumed, or used up. Society is interested in all the wealth accumulated, and the methods of its accumulation and its fair distribution are a part of social machinery; yet these have their chief significance in the final consumption. It is not what we have, but what we do with it, that makes society interested in our possessions. It is not what society has, but how it uses it, that settles the chief questions of welfare or illfare. Not only gun-

powder, but every conceivable power in material wealth, has blessing or bane in the use to which it is put. So the welfare of a community cannot be judged by the amount and kind of wealth produced or by the methods in production or by the distribution of ownership. These may be significant in showing the trend of social customs as to individual control, but the last inquiry will still have to be, What welfare comes to the entire community when all this wealth is used? Moreover, no analysis of qualities in any substance called wealth can measure the welfare involved in its use. Its relation to the individual using it and his relation to the whole community, with a careful analysis of wants met and character developed, must be considered. The final question is, How many and what kind of wants are satisfied?

Use of wealth individual.—It is necessary to realize that the social organization is maintained solely for the sake of individuals. All study of welfare and illfare is a study of individual human beings. The mutual relations of these human beings in society are means to individual life, growth and enjoyment. Even the total power of a generation in society is dependent upon how the individual wants of individual members of that society are met. Some of the greatest mistakes in estimating social welfare arise from overlooking the essential individuality of wants, upon which all wealth depends for its use.

This individuality makes the proper consumption of wealth largely a question of right and wrong. The possessor of any form of wealth is obliged to recognize

his place in society as a promoter of welfare, and society compels, as far as it is able, a recognition of individual needs. Yet the very nature of consumption, as concerned with individual wants, makes individual judgment supreme in the use of wealth. It is my ideal of good health, high culture and sound morals that must be met for my enjoyment. My welfare, so long as I have rational powers, is the meeting of my ideal. Society rightly hesitates to interfere with my ideals by force as long as my actions do not disturb the welfare of my neighbors. The necessity of human liberty for actual welfare limits the control of society to very evident infringements upon others' welfare in every activity, including the use of wealth as well as other powers. This very restriction is in the interest of highest total enjoyment of welfare in the whole community.

Individual responsibility for use of wealth.—In estimating the proper uses of wealth, it is necessary to remember that mere animal existence is a very small part of human welfare. It would not be enough for any human society that every individual in it be fed, clothed, warmed and maintained in reasonably long life. The highest uniformity of mere animal enjoyment would not make a society worthy to be called human. Even uniformity of wants far higher, with uniform supply for those wants, would give but little organization and but little total welfare if that uniformity was brought by curtailment of natural powers or by constraint that hinders growth. The most natural fact among human beings, as in all the rest of nature, is variety; and every conception of proper consumption of wealth must involve

this thought of variety of individuals in wants and powers left free to grow. It is a purely false assumption that the ideal community toward which all ought to strive is a community of equals in either ability or capacity. That is the ideal community which gives to every member of it opportunity to make most of himself; that is, to make himself most useful, and able to enjoy the truest use of his powers.

Hence we find the tendency in every community, with reference to wealth as to other individual forces, to recognize early and complete personal responsibilty. This personal responsibility makes the question of consumption of wealth a question of morals as well as of wisdom. The whole discussion here turns upon the wisdom or unwisdom of certain personal uses or social uses of what the world has accumulated. We can ask what use of wealth is prudent, what imprudent; then what social organization best develops the wisdom which secures a prudent use of wealth; and finally, how far and in what ways society can act as a unit in the place of individuals. The machinery of government then becomes a part of every person's welfare, and his relation to its maintenance by contribution of his wealth is a part of prudent consumption. The economic question in consumption, then, involves not so much what one can get from society as what he can give to society, since his welfare comes largely through organization in the use of accumulated wealth.

CHAPTER XXIV

PRUDENT CONSUMPTION

Prudent uses of wealth.—It has already been suggested that a proper use of wealth looks always beyond the present. We accumulate, not only to spend, but to spend in such a way as will give larger abilities in the future. The name prudential consumption has been given to all that use of wealth which has for its end the maintenance of individual powers at highest efficiency for the longest life and provision for a more efficient posterity with more efficient instruments of production.

It is prudential use of wealth to gather into the farm, not only such machinery in the shape of buildings, fences and roadways as will make the future labor more effective, but all possible fertility that will make the future owners of the farm a larger welfare in possession. All wealth put into the form of productive capital is prudentially consumed. All so-called permanent improvements which look to the better satisfaction of future wants fulfil the condition of prudent foresight. All public improvements are really such, when this far-seeing provision for future wants and abilities of society is made. Such methods are the genuine economic saving in which the community should be encouraged. A saving which merely stores against a future personal want contributes less to general welfare, and

does not stimulate the natural growth of wants in the individual, which is the chief source of increasing power. The one who saves that he may have better tools with which to do more for his future satisfaction, not only adds to his physical abilities to meet his daily wants, but adds the strongest stimulant to energy in his work. The supply of ordinary wants being provided for, new wants arise.

In the spirit of prudential consumption such wants are encouraged as give greater and greater abilities. Thus the ideal of life is constantly raised, and the struggle is not for existence but for higher enjoyment and more genuine welfare. The wealth which comes in this accumulation of capital for larger accomplishment aids true philanthropy. The whole world gets more of welfare with every addition made by farmers to their working capital. In the same way all increase of capital in machinery, tools, warehouses, ships and other means of transport contribute to a philanthropy that makes society richer.

Such saving is entirely opposed to the miserly spirit which hides wealth because of mere love of possession or fear of future want. It is the true way of both spending and having, since it expends earnings for that which continues to aid in bringing larger returns to meet increasing want. That social system is most prudent for the world which accumulates productive capital without reducing any part of society to poverty. Prudence, however, requires that this capital saving be adjusted to the abilities of the community in which it is to be used. The building of an enormous factory, where

skill has yet to be developed and where a market is wanting, would be the height of imprudence. Such waste is sometimes seen under the false stimulant of a bounty or a restrictive tariff. Just so, great public improvements upon rivers, harbors and highways are a part of economy and prudent investment of wealth only when a community is able to use them to advantage. The test of prudence in capital saving is in its nice adjustment to the abilities of the users.

Prudent adjustment of capital.—A still further adjustment is required by prudence between the capital put into fixed forms and the circulating capital needed for best use of the more lasting machinery. A farmer is said to be stock poor when he overloads his farm or crowds his farm buildings with growing stock. Having all his capital in stock, he is unable to handle it to advantage, and must readjust his capital in live stock to his capital in the farm and machinery by selling some of his stock and adding to the value of his farm. On the other hand, many a farmer is land poor, where the bulk of his capital is invested in land, while he cannot command circulating capital in stock and wages sufficient to make the land useful. He needs, in the spirit of prudence, to sell some of his land for the sake of current funds to invest in live stock and in labor. The same principle applies to all investments of capital. A railroad may so exhaust the funds of the community in building it that it cannot be fairly manned for work. Sometimes a whole nation invests so largely in permanent forms of capital as to bring distress and poverty from want of means to use the great machine.

Prudence also requires a further adjustment between the amount of labor directly producing wealth and that employed in what may be called the arts of consumption, contributing directly to personal comfort and enjoyment. The neatness of a farmer's yard, outbuildings, fences and machinery is a part of his welfare. It also indicates a certain thrift, which enhances the value of the farm. But it is a proper sign of such thrift when it grows naturally out of the productive energy employed upon the crops and the stock. The wealth used in maintaining this neatness is not wasted, but it will not reproduce itself. It must be supplied from other sources in direct production. All services in the household, in contributing to bodily comfort of the family, make an essential part of human welfare, but prudence requires such an adjustment of these services to the total wealth-producing energy that they may be maintained without reducing the total power. All public expenditures in the care of streets and parks are an essential to welfare so long as the sources of wealth production are kept the more active from such advantages. The test of prudence in all such adjustment is the increase of power in wealth-production, along with increasing welfare.

Provision for future wants.— True prudence is largely foresight, and so is the enterprise of speculative energy which provides any product for a future market. No more careful adjustment is necessary than that which secures such a product of farm or factory as the world will need when it reaches its actual market. The greatest wisdom is needed in studying the conditions of a

community with reference to its future wants, and the supply actually accumulating for meeting those wants.

Farmers need, as truly as any producers, to know the wants of the world for which they are producing food. The crops they plant in the spring will actually be consumed in large measure during the following year. Prudence suggests that they plant such crops as will be most in demand. If they judge by the market today, they are in danger of two errors: first, of overestimating the future demand, which may be satisfied before the new crop comes; second, of diverting from ordinary staple crops too large a portion of the crop-raising force. Common experience has taught that a high price of hops or onions or broom corn has almost certainly wrought a reduction of the price for succeeding crops below the normal cost. Still larger foresight is needed with reference to the raising of live stock, which requires more than a single season's investment of capital. To stock a farm with hogs, sheep, cattle or horses, requires from one to five years of accumulated capital. The record of farm stock shows successive waves of such production in direct opposition to prudence. (Chart No. 4, p. 83.)

The manufacturing world has similar experiences of imprudent consumption in the effort to forestall a market. But the record of failures in this respect is scarcely as marked, because of more business-like collection of information for the guidance of judgment. Farmers too generally follow the lead of their neighbors in adjustment of crops or stock. Manufacturers more generally try to do what their rivals are not doing. Success in producing what is not finally wanted we call overpro-

duction. While the whole world is warned against this, each individual producer fails to study as well as he might the means of avoiding it.

Prudential consumption does not properly provide for those speculative dealings which end simply in a readjustment of wealth by gains on the one side through losses on the other. All these imply an actual waste of wealth and energy, whether they are exhibited in a gambling machine or a board of trade. But there are certain great enterprises, like wonderful inventions, which involve a prudential consumption of wealth. The wealth consumed in developing the electric telegraph system, or in laying the Atlantic cable, everyone would judge to be well invested. Every thought of prudence sustains such expenditure. Yet the spirit of invention, as a mere venture in desire to hit upon something which may chance to be wanted, shows lack of prudence, and the world suffers by great waste of energy in this direction. The only test of prudential consumption in provision for the future market is in the careful study of all conditions, favorable and unfavorable.

Consumption for growth.— True prudence in public improvements has just been mentioned, but such prudence has a larger range in promoting the permanent growth of human powers and capacities. Every wise father wishes his children to know more, be more efficient in the arts of life, and enjoy more of true welfare than he does. Communities which show no advancement in these respects are called dead, and decay is sure to follow. Prudence looks after all educational interests by expending wealth upon the means of education; not

only sustaining schools, but making more permanent provision and increasing facilities for instruction. This is not only a means of preserving and wisely using the wealth accumulated, but a means of increased production. Such prudence suggests large endowments for public education, including the support of government machinery for uniformity of education. A similar prudence sustains the philanthropic spirit which maintains all the means of philanthropy. The endowment of asylums for the weak and afflicted and the support of religious institutions are prudent ways not only of caring for present welfare, but of increasing the welfare of the future. The next generation will be stronger and happier for the prudent foresight of this generation in overcoming obstacles to health and wisdom and virtue. To leave wealth thus invested is far better for successors than to leave it in form for ready consumption upon temporary wants. Thus all prudent consumption of wealth has for its basis the genuine welfare of a continuous society of human beings subject to improvement. Any forming community looks surely to future welfare when it invests wealth in good homes, good schools and good churches.

CHAPTER XXV

IMPRUDENT CONSUMPTION

Society interested in imprudence.—This fact, that the wealth of each generation is so largely dependent upon the prudence of the preceding, emphasizes the importance of public sentiment in favor of prudential consumption. Public criticism naturally attacks the most noticeable failures of prudence, and it therefore seems worth while to consider some of those imprudent forms of consumption which society may seek to prevent. It is also proper to consider the ways in which society may act for prevention of imprudence.

Luxurious consumption.—The question of luxury in the same society with extreme poverty is always prominent. Luxury is supposed to be extravagant expenditure in meeting individual wants. Though such wants may be real and legitimate, lavish expenditure by any portion of a community seems at first sight a trespass upon common welfare. Some have considered that person wanting in good will to his fellows who expends upon his own comfort more than his neighbors can afford. Others define luxury to be expenditure for living above the average expenditure in the whole community. Still others regard any expenditure a luxury which is not needed to maintain physical powers.

It is easy to see that all these efforts at definition are

imperfect, because the idea of luxury implies such a mode of life as does not contribute to the total welfare, and each one's idea of total welfare enters into his definition of luxury. It is an evident fact that the so-called luxuries of one generation become the actual necessities of the next. This is because the life of the race means more and includes more with each succeeding generation. To live in the twentieth century will mean, as it has always meant in the past, to have such exercise of every ability as circumstances permit. Luxury is therefore always relative to the duties one has to perform, as well as to the society in which one moves. Moreover, luxury is relative to individual abilities and individual plans. It would be luxury for a farmer to go without a needed plow for the sake of buying a lawn mower. It would be luxury for a student to own two coats, if he must go without a dictionary to buy the second.

It is easy to settle the luxuries of others, but less easy to so define luxury that the public can agree in the definition. In general, it is described to be a meeting of fanciful rather than real wants. Any individual in society is spending his wealth in luxury if he allows his imagination to conjure up adornments of person or household which contribute chiefly to display rather than to comfort or enlightenment. All such adornments of person, or home, or the public streets, as cultivate genuine taste and inspire to more of energy contribute to the general welfare far more than mere expenditure for food can do. Yet in times of starvation the food must come first. The world sometimes sneers at the desire among very poor people to cultivate flowers and main-

tain a canary or other pets; yet every philanthropist knows that these desires are among the strongest incentives to greater thrift and keener exertion.

Legal restrictions upon luxury.—With all this difficulty in definition and the certainty of change from age to age, there is nevertheless a disposition on the part of society to restrict actual luxury. Again and again this has led to enactment of laws prohibiting expenditure in certain definite forms. The dress of ladies of rank has been restricted as to style and quantity of material and ways of making. The variety upon a dinner table has been limited to a certain number of dishes and certain kinds of food.

All of these have been egregious failures, from the impossibility of measuring results upon the general progress of civilization. The indirect effects of ingenuity in dress and cooking have been on the whole so beneficial that the world cannot afford to hinder it. The intricacies of French cooking seem to an ordinary household extreme luxury, yet that very ingenuity has cheapened the cost of living, to a large portion of the world, by rendering palatable the coarser vegetables and cheaper meats which lie within the reach of the poor.

No real student of human nature would now attempt, unless it be in the emergency of a great famine, to restrict expenditures by law upon the plea of luxury. Still, society as a whole has some voice in directing the judgment of individuals. Public opinion is an effective check upon desires. The good will of the multitude is more important to the mass of men than any particular gratification. It is proper, therefore, to discuss at any

time and at all times the limits of luxury, both for ourselves and for our neighbors. The sole cure for imprudent expenditure in luxuries is individual culture of mind and heart and conscience, so that each may do his best to secure, not only the good will of his neighbors, but their welfare.

Wasteful consumption.—Wasteful expenditure through ignorance or recklessness is more common and more weakening than luxury. Its limits cannot be described, since it covers expenditures of every kind, from the simplest provision for food and clothing to the most elaborate structures and wildest schemes of development. Though noticeable wastes are seen in the households of the rich, they are relatively larger among the poor.

Yet any attempt to regulate such waste by law is futile, chiefly from the fact that it ignores the personal responsibility and wants which make individual character. It is properly applied to the imbecile and the insane, as well as to children and youth, through the appointment of a prudent guardian. Society can protect itself only by fostering more complete systems of education in the arts of life. The tendency of our times toward a more technical education, especially in reference to the home and the common industries of life, marks the growth of public opinion toward a clearer ideal of prudence against waste. The study of economic principles in every department of life, and especially the clear understanding of everyday facts as to the things men handle and use, cannot but give wisdom for preventing waste.

Vicious consumption.— It is customary to distinguish from all other forms of imprudent consumption of wealth such vicious indulgence of appetites as not only consumes accumulated wealth but diminishes power in production. Such vicious indulgence is the result of cultivating unnatural and destructive appetites. Familiar illustrations are those connected with the drink habit, the opium habit, or any other vice whose chief effect is seen upon the individual life of the one indulging himself. These involve the very highest wastefulness, because they destroy not only wealth, but ability. Nobody can begin to compute in terms of money the actual waste of our country through indulgence in strong drink. The value of liquors consumed is no measure of the entire wastefulness. Yet this is more than enough to furnish all with bread.

The wrongfulness of such indulgence, from its harm to society through reducing the power of the race, is seldom disputed. Yet the right of society to restrict the individual indulgence is quite generally disputed. The larger need of freedom in the exercise of judgment among mature members of a community outweighs the need of preventing even vice. Society does well to bring the restraints of law upon the immature, whose judgment is not yet formed, thus supplementing by law the directive energy of parental control. It may yet go further, and prohibit such indulgence to all who have lost the power of self-control. But in general it has been found impossible to enforce restriction upon vicious indulgence except where such acts occasion direct suffering upon others, or help to maintain an immoral busi-

ness. The right of restraint and constraint, even to prohibition, of that which fosters vice and extends its range must be admitted by all thoughtful persons. Still, the right to prohibit and the power to prohibit are not identical. The only sure preventive is early education of public conscience through the training of youth to a clear understanding of the vicious practices and their relation to the poverty and weakness and crime of humanity.

Destructive consumption.—A more obvious trespass upon prudential consumption is criminal destructiveness of every kind. Until society outgrows a condition in which fraud, theft, robbery and murder must be warded off by locks and bars, by immense bodies of policemen and armed militia, its wealth cannot be wholly invested for welfare. The possibility of such crimes as arson or train obstruction and destruction shows the condition of the best of modern communities to be far from ideal. Nobody pretends to measure the actual waste in society resulting from such criminal purposes. It extends to almost every detail of production and trade, and occupies a large portion of the inventive and executive energy of the people. Organized society attempts to restrain such waste by its police force, or by restraining laws and injunctions enforced by severe penalties. Every honest man is financially interested in the conviction of every knave. Sympathy with fraud, even in trifles, is contributing toward such destructive waste.

In this connection the enormous expenditure in maintenance of standing armies and navies for the protection

of national boundaries is of special importance. Reduction of this waste of wealth and power should be desired by every class of society. Though war has been the means by which human liberty has grown, it has also been the means of crushing it. It would seem that every incentive is offered each citizen to make an appeal to arms and the maintenance of armies a most remote necessity. Yet it seems that the mass of men of every rank are tenacious of national honor. While most communities have abandoned the duel as both wasteful and immoral in personal difficulties, the spirit of the duel is still rife in the differences between nations. A clearer perception of mutual interests in national welfare will bring nations, like individuals, to accept some method of enforcing neutral judgment for settling disputes, in place of war. The farmers of a country, being nearly 50 per cent of its people, and bearing a large proportion of the expense of armies and wars, have a tremendous interest in maintaining peace. This can be done not so much by reducing the provision for armies as by cultivating the spirit of fair settlement, against the false patriotism which claims everything for one's own nation.

False notions of waste.—Wasteful expenditure and luxury and possibly even vicious indulgence are often excused with the plea that expenditures of this kind make employment for labor, and so aid the poor. While it is true that multitudes are employed in catering to the vices of others, all must grant that the same wealth might be much better employed in other occupations. More than that, the larger wealth resulting from accumu-

lation in place of waste would provide capital needed for fuller employment of all who can work. All imprudent expenditure reduces the power of society to accumulate wealth for giving occupation to all who will work. Moreover, such wastefulness creates a tendency toward thriftless character among the people. The welfare of the whole community depends upon the thrift of the whole community. The thriftlessness of rich men's sons is more damaging than the thriftlessness of tramps, because it is more tempting to others. Any man who lives simply to spend, however busy he keeps himself, is one of the wasteful ones in the community, unless he has some higher object than gratifying his desires. The energetic idler may be doing his worst for the community without being ranked as a spendthrift, because he makes such idleness respectable. It should be the desire of all good citizens to increase the ability of every other citizen, not only to live, but to live well. This thriftlessness can be overcome only by a strong public sentiment that corrects the early tendencies of youth to waste of means and energy.

Waste in rivalry.—There is another kind of wastefulness resulting from excessive competition for a particular business or a particular trade. Immense amounts are expended upon rival advertisements, all of which enter into the general cost to consumers. A multitude of retail dealers maintain stocks of goods entirely out of proportion to the needs of the community, because they are rivals in trade. Very likely the business rents are higher than they need be because of such rivalry. Not only is there a strong competition for a place, but also

for showy equipment and elegance of display. All this could be saved by better organization. A still more evident waste is from the multiplication of agents and middle men of all kinds, employed simply in catching trade. Some of them act simply as interlopers, hoping to gain a small commission without the use of capital or painstaking in their business. These are the useless middle men maintained at the expense of the community. Full market reports and general information of buyers and sellers greatly reduce such waste.

CHAPTER XXVI

SOCIAL ORGANIZATION FOR CONSUMPTION

Individualism.—While the social organization is necessarily thought of as a group of individuals, whose individual wants and plans and growth and character must be the chief incentive for action, it is necessary to avoid the extreme of individualism. In escaping from the false analogy implied in considering society an organism, there is a tendency to make the individual not only of final importance but independent of association. Excess of competition is represented in the maxim, "Every man for himself." In the effort to carry out this maxim and in opposition to restraints of society, whether by law or by custom, many are led to advocate an abolition of organization, leaving all welfare to be secured by appeal to the individual judgment and conscience of men. It is true that back of all law is the law of righteousness in individual souls.

Under the name of "autonomy" theorists propose to appeal to this conscience of individuals, making every soul a law to itself. Such theorists assume that every human being will be wise and virtuous, or take the consequences of his failure. They forget that all organizations for constraint are a part of the natural consequences of failure in self-control.

Under the name of "anarchy" groups of people all over the world have united to destroy what they consider arbitrary rules in government. Anarchists differ from autonomists in putting foremost the destruction of existing governments. Their ideals of right and wrong and their methods of individual action for individual welfare are left for the future to develop, after the rule of the present has become no-rule. Their present organization, as far as it is public, appears to be, in almost direct contradiction of their principles, an absolute despotism. The same idea has gained followers in some countries, particularly in Russia, under the name of "nihilism."

While in some instances such movements may be but a natural reaction against tyranny, the view of human wants and human welfare which all these advocates present is far from being correct. The grand economic fact that groups are superior to individuals in actual efficiency is beyond dispute; and it is equally true, though not so often stated, that groups gain greatest satisfaction for a given consumption of wealth. It is only when great numbers share in satisfaction that the highest range of wants can be gratified. Moreover, even individual wants are largely social. Each finds his highest pleasure in the society which nature has provided. The chief reasons for accumulating wealth are in what men can do for each other. Any individualism which overlooks these principles is opposed to welfare, and so self-contradictory.

The famous French phrases, "laissez faire" and "laissez passer," which represent the individualistic side of economic theory, are often extended beyond the in

tent of the phrase makers. They mean essentially, let do, let go, and have their proper application in an appeal to conservative society to so modify laws and customs that individual enterprise, ingenuity and thrift shall be stimulated to its best by freedom. Freedom from restrictions in right-doing, under the evident motive furnished by general welfare, is an ideal for society. In economic directions it has great importance. No thinker can fail to see the trend of civilization toward such freedom. So far in the history of the world the enlargement of individual responsibility, by freedom from constraint among the mature members of society, has been the chief mark of progress. Yet the constraint of welfare, and of the general judgment as to what is welfare, as well as the necessity for agreement as to ways and means of reaching it, are better recognized today than ever before. The extreme of individualism destroys the natural constraint of a common judgment.

Socialism.—The opposite extreme is the assumption that common wants are of supreme importance and common judgment absolutely efficient. Under the name of "communism" it stands in direct contrast with anarchy. Anarchists and communists may unite upon a platform of a single plank, opposition to existing institutions; but in all ideals and purposes and plans for future welfare they are absolutely opposed to each other. The natural community of interests so evident in society gives a fair basis for the general principles of communism. No doubt the welfare of all is the interest of each, and the world is growing to recognize it. Among a group of beings perfectly wise and virtuous there

could be no clashing of either interests or judgment. The ideal of Louis Blanc, "From every man according to his powers, to every man according to his wants," would represent the natural activity of such a group. But in application to humanity, as it is and is bound to be by its weakness and waywardness, it seems abstractly ideal. In fact it is only roughly applicable in ends to be served, and suggests almost nothing as to ways and means. Like the golden rule, it applies to the disposition and purpose of the actor, but leaves the acts to be decided by individual judgment.

The numerous phases of opinion in application of this principle cannot be presented even by name in this short chapter. They are worthy of study as indicating a growth of opinion and sentiment in recognition of the mutual dependence of all human beings. They are also worthy of study as indicating how arbitrary a zealot may become in enforcing his opinions upon others. All of them are grouped somewhat loosely under the name of "socialism," but there are many gradations in the supremacy of the social ideal over the individual welfare. There are also many shades of opinion as to how the final result of social supremacy shall be reached. Many are expecting a revolution by force of arms to establish the ideals of the leaders. More are opportunists, snatching every opportunity in legislation, in decision of courts, and in executive power, to apply their methods.

Under the name of "collectivism" appeals are made to the multitude to combine their energies under leadership: first, to overcome present restraints; and then to

secure combined action in all modes of production and consumption. "Nationalism" is more familiar to our thought in the United States, as embracing the aim of a somewhat noisy party to bring about the compulsory organization of all industries under the control of the nation, even to placing all property and all methods of consumption under an official despotism.

Few recognize the actual logic of their views as compelling complete subjection of every individual to others' judgment, and fewer still have any idea of the official machinery needed for such control. The great majority are satisfied in seeing evils which might be cured by greater social accord, expecting at once to vote into existence the necessary machinery. Most of these are misled into considering wealth and its uses to be the chief elements of welfare. They forget that wealth is only a means of accomplishing one's purposes toward his fellows and himself. The greed of power and position and praise are far stronger as evil motives than greed of wealth. If wealth were distributed by omniscient wisdom and power according to the maxim of Louis Blanc, the higher welfare would still be as far away as ever, unless the same omniscience should control all actions. Such control by outward force would banish the very idea of virtue, the highest of all welfare.

It is easy to see that every form of socialism, in practical methods, involves a leveling process inconsistent with human nature and its surroundings. Equality of environments is possible only by reducing all to the lowest condition. Equality of aspirations reduces all toward the most brutal of the race. Even equality of

efficiency reduces all to the power of the least efficient. So the whole range of method, assuming equality of wealth as important to welfare, lowers the welfare of the whole by destroying the best abilities and the best capacities for enjoyment in order to prevent inequality.

And yet it has not been proved that equality in any of these particulars is desirable. It is equally beyond proof that actual equality is possible. The most absolute communism implies the greatest inequality in official power. Even the pleasing phrase, "Equality of opportunity," will not bear analysis as applied to human nature and human welfare, under the very highest ideals of social unity. Indeed, the lesson of facts in all activity is that inter-dependence of *unlike* and *unequal* forces makes the true unity of organization, and the surest welfare of multitudes. That each individual should have the best opportunity possible for his own development is best for each and for all in a community; but that such opportunities shall be equal in any other sense no wisdom can contrive. Most socialistic theories presuppose almost immediate change of human nature under the new form of administration. But for this supposition there is little ground in the history of the race or of all nature. Growth there will be, and evolution of ideals; but the administration grows out of these, instead of being their cause.

Socialistic tendencies.— Socialistic theories gain adherence under the provocation of certain tendencies in society. First, they appear whenever by oppression or fraud of any kind a community is made up of one class possessing wealth directly opposed to another class with-

out wealth, with no extended middle class, and therefore with no ready means of transition from one class to another. As long as the doors are open for real progress in power of accomplishment, all the way from poverty to wealth, society has a unity in its variety that is better than any communism promises. At present in our own country, with the great multitude of farmers' families furnishing not only the necessities of life, but the larger part of human energy that goes into every calling and every rank, socialism does not appeal to any large number. An earnest, thriving farmer's family will never believe advantage to come either to themselves or to the race by making them all practically mere wage-earners.

Second, a common cause of socialistic views is separation, under extreme division of labor and opposing organizations sustained by it, of the workers in very distinct fields of labor. The jealousies arising between these classes, or guilds, or between employers and employed, foster the revolutionary spirit which jumps at any promise of relief from unsatisfactory conditions.

In the third place, a political revolution, if it has destroyed landmarks of the past and any natural sentiments growing out of social relations, leaves a mass of people at sea with reference to the nature of rights. Under such circumstances socialism offers an apparent solution of difficulties unprovided for. Though any practical effort to apply these theories under such circumstances usually results in despotic assumption of authority by a few, the people are moved by the pleasant-sounding phrases. If, in the settling of social affairs after a revolution, an earnest effort is made to agree upon

set phrases embodying principles of constitutional liberty, the chances are in favor of some sweeping statements, too general to control action, but over-emphasizing individual rights in comparison with individual duties. Action under these declarations usually conforms to the necessities of the case, accepting the immediate welfare of the society as a guide to more complete welfare.

All these conditions are abnormal, wholly unfavorable to a fair consideration of what will promote welfare. Even if socialistic methods might work fairly well when all were favorably disposed, there is great question whether they would work as well as present social methods, under equal good will. It must not be forgotten that every scheme of nationalization, for its own sake, implies the government of every individual by everybody else, thus hampering under petty regulations and by force of multitudes the growth of every individual. No scheme for national direction provides as natural tests for merit, ability, enterprise or necessity as present methods are known to do wherever fraud and tyranny are abolished.

Coöperative consumption.—In the natural order of social development there is room for much more general association in the consumption of wealth than we sometimes think. The world has made great progress in this direction during the last fifty years, through voluntary organizations for prudent expenditure. The only limit to such community of organization for special purposes is in the nature of the work and the relation of the workers. Coöperative stores, banks, building and loan

associations, laundries and even kitchens are within the range of actual experiments. We have already seen how such coöperative interests may operate in simple investment of capital for production. The chief obstacles in them all are the lack of certain characteristics of prudence in a multitude. In general the best management does not accord with the judgment of the mass.

A few brief maxims may indicate the natural restrictions upon such methods. Coöperative consumption is successful: first, where those coöperating are fairly equal in wants and abilities, or closely related through kinship or friendship; second, where the range of coöperation includes common wants; third, where no one is given the advantage of credit; fourth, where mutual confidence selects and sustains a continuous management; fifth, where frequent and full reports can make the business plain to all concerned. It would be interesting to follow the growth of coöperative stores and banking associations from small beginnings to enormous enterprises, but the limits of this volume will not permit. This extension may be realized from the statement that the Rochedale coöperative societies of England now number nearly two thousand, with more than a million members and nearly seventy-five million dollars of capital.

CHAPTER XXVII

ECONOMIC FUNCTIONS OF GOVERNMENT

Governmental limits.—All society recognizes certain universal wants and the necessity of meeting these with essential order and the best economy. These universal wants enforce the organization of society under some form of government. Such an organization grows out of the necessity rather than the will of humanity. Hence government, local or more general, is the direct effort of individuals in society for the general welfare. Usually the best test of general welfare is the assent of the majority of mature and intelligent members of the community. In the history of the world, however, the importance of the object to be gained has overcome obstacles in the will of the governed as much as any other. Among children the right of the parent to govern for the welfare of the family is never questioned until character and wisdom are doubted. Among crude and disorganized bodies of people, superior wisdom and earnest purpose make leadership. Yet always, in the end, the ideal of welfare in any community implies growth of individuals into authority over themselves as one of its main objects, if not its chief one. Thus the best government for any community at any stage of its advancement is the one that best secures the welfare of all in existing circumstances.

It must be remembered that the chief elements of welfare are above government. All the kindly affections which make the chief bonds of society are to be cultivated by good government, but cannot be forced by any law, either positive or prohibitive. Individual character in all its proportions is individual growth, which can be fostered but not forced. All the catalogue of virtues is made up of elements of character, not one of which can be made by force. So government of every grade fosters the highest welfare of individuals by sustaining virtuous motives and restraining vicious ones, or rather by encouraging right action in its enjoyment of welfare and restraining wrong action by deprivation of welfare. Government, therefore, is best when its aims are distinctly confined to universal welfare. The distinctly personal wants can be best provided for by affording the best conditions for free exercise of individual powers. Governments can never wisely do favors for a class, since such favors weaken the power of government for promoting general welfare. What government does for any it needs to do for all. What it does for all it must secure to each in fair proportion. In any effort to extend the range of governmental action this natural limit of universal welfare for individuals must be considered.

Ends of government. — In this view of the reasons for organized government and its natural limits, certain universal wants can be clearly perceived. Most obvious is protection against external foes, personal or material. This universal need, in the presence of personal enemies, is so plain as to make the crime of treason notorious. The internal peace of society is just as evidently

a universal necessity, and so any infringement upon the order of society, as agreed upon either by express statute or by the common law of established precedent, is punished as a crime against all. Personal violence, even in the shape of private vengeance for wrong done, is a menace to internal order, and so a crime against the whole organization. The mutual dependence of each upon all and all upon each in every-day transactions enforces the interest of the organization in personal contracts, and makes the government a partner with every right-doer against every wrong-doer in all attempts at fraud or abuse of power of every kind. This guardianship of personal freedom makes necessary the bulk of criminal law and most of the machinery of courts. The arbitration of disputes between interested parties is a natural sequence of the effort to prevent violence. Government does not and cannot right wrongs; it barely saves a remnant of good to the individual wronged, and furnishes a warning to others against future wrong.

Universal needs. — Every force, external or internal, which is likely to be injurious to the whole community, the whole community through its organization is obliged to combat. Hence the necessity for quarantine against infectious diseases wherever found, and provision against destructive storms wherever possible. Protection against the ravages of insects falls into the same list, and so does every safeguard in which the whole community is interested. The same principle applies to positive provisions for welfare in economical ways of meeting universal wants. The universality of the need

makes the water supply and the lighting of cities a proper work for the city organization. If the same machinery can provide most economically for larger personal wants without infringing upon the rights of all, simple economy invites it, and the principles of good government sustain it. The question of municipal lighting is simply one of true economy for the entire body of citizens.

For the same reason, that everybody needs it, the government is obliged to have control of the means of transit so far as ease and safety and economy to all require. Government must maintain highways suited to the needs of the community at all stages of its development. The question of city management of street car lines, beyond such control as secures safety and essential justice, is purely one of economy for all concerned; that is, for the entire community. This economy is not settled for one community by the conditions of any other. It must be decided in each community whose interests are to be served by the actual need and abilities of that community.

The same may be said in regard to all methods of providing ready communication of wants and abilities as needed for mutual welfare. The postal system is a natural government machine, because every citizen needs to be within reach of every other citizen in the same community. If government does not furnish the machinery, it must control it to the same end. The extent of the machine must be decided by the extent of the want. If the want is sufficiently universal, the organization cannot avoid providing the machinery.

This principle applies to every form of communication devised or discovered. The question of government ownership of telegraph or telephone connections becomes one of simple economy, whenever the community finds such means of communication a matter of universal want. If economy or vested rights of individuals prevent such provision, government must still guard these universal interests by inspection and control. The exact point where government ownership becomes economical and legitimate must be decided by a careful weighing of the general interests of the whole community.

Universal education. — The necessity for universal intelligence is so evident that governments not only recognize and foster benevolent efforts of individuals for education, but rightly make the organization itself a direct force in maintaining educational institutions. Public schools are now universally recognized by most enlightened people as meeting a universal need, and therefore one of the essentials of good government. How extensive such provision should be is still an unsettled question. In fact, it can never be finally settled in any growing community, because the universal need of the community becomes more and more extended. So far as universal intelligence depends upon the higher intelligence of leaders in the community, the whole mass is interested in the training of that higher intelligence. The very nature of education, shedding its light over all in its neighborhood, makes every member of the community a sharer in the advantages of university training. Hence governments rightly and economically

administer educational systems which involve the welfare of all. The same responsibility makes improper the use of public funds in support of private institutions without such restrictions as insure the good of all.

The propriety of governmental control of churches and religious training must rest upon the same basis of principle. Religion is of such a personal nature, so wholly a matter of conscience, that it cannot be said in any proper sense to be universal. Yet the need of religious sentiment and freedom in development of that sentiment is universal. The state does well to provide security for religious thought, practices and fostering influences in all governmental machinery. On this ground the civil law protects a Sabbath. The state church has had its apparent reason for existence, and still has in many parts of the world, from the close connection between religious training and popular education. Naturally state churches emphasize the educational side of religious institutions. The world is coming to see more clearly the dividing line between information or thought about religion and religious action in faith, its common basis, and can leave the latter for individual growth.

Government wards.—The welfare of the whole reaches finally to a guardianship over such individuals in the community as endanger, either by weakness or by wickedness, that welfare. For this reason government can maintain asylums for the weak or diseased, or even the extremely ignorant, not simply to protect these individuals, perhaps not chiefly for that purpose, but to

protect the whole. It can rightly and wisely enforce such protection by health regulations and officers, and by truant laws and officials. Upon this principle it may rightly constrain even the friends of insane persons to give up control of the insane to the safer public provision in asylums. When any community realizes a similar need with reference to inebriates, it will assume the same constraining authority.

In dealing with the problem of personal wickedness, a community must still draw the line between universal and individual welfare. The criminal injures all; therefore all must constrain him, and effort is made to measure that constraint by the evidence of opposition to public welfare. Vices are more distinctly individual. They touch the universal welfare in those forms which propagate vice in neighborhoods. Governments universally fail to enforce laws against personal vices wherever the danger to upright character in other persons is not clearly perceived. All restrictive legislation upon vicious habits, like intemperance, gambling or other immoral practices, is naturally aimed first at the places contrived to foster such habits, and therefore to attack the innocent. The actual working of such legislation in preventing the growth of vice is the only final test of its wisdom. What it *can* do is what it *ought* to do. In general the actual public sentiment in local communities must be the main dependence for executing such laws.

Protection of the weak.—The common statement that government must protect the weak against the strong is subject to the same principle of universal welfare, and is applicable only where society has definitely recognized

rules of good order which somebody is violating. Any attempt to supply to the weak a strength which they cannot wield is necessarily a failure. But society as a whole rightly shields children and youth, and even women of mature years, from burdens which may injure the general health or wisdom or virtue of the community. Laws prohibiting contracts which involve such burdens can be enforced so far as the community appreciates the evil of such contracts. So, to a certain extent, weakness from ignorance may be protected by any method that tends to remove the cause of weakness. All such action of government must be carefully guarded against becoming such a protection as will render the weak weaker.

Public responsibility.— The organization of community is best for the mass of the people when all desires are allowed to give their proper impulse to action, and when every enterprise is encouraged by freedom until it is seen to infringe upon the general welfare. Any system of government which checks natural impulses and hinders individual enterprise, without clear evidence that all must suffer from such freedom, is harmful. The genuine application of the phrase "laissez faire" is in giving honest efforts free course, because these efforts secure the largest good. It really means, leave humanity free until injury is attempted. In general, government has to deal with all necessities which are identical throughout the community. Provision for those necessities and those only it is bound to make.

All questions of nationalization of industries or of

community consumption must be brought to the test of universal need. What the whole community wants the whole community has a right to provide in the way which brings most good with least expenditure of exertion in any form. No other question can outweigh in importance this one of public need or public welfare. Every producer and every consumer is interested in seeing that such welfare is not overlooked by the public, or infringed upon by any individual or combination of individuals in his community. This must be done by emphasizing personal responsibility, even in public enterprises. For the statement is beyond dispute, that the attempt to substitute corporate responsibility for personal responsibility ends in no responsibility at all. Above all things it is necessary to remember that all the progress yet made from the starvation and degradation of barbarism has been by organized interest of the whole community in protecting first individual life, second individual liberty, and third individual property, as the foundation of universal welfare. Yet society holds all these rights of individuals subject to the same higher law of welfare by restricting the purpose of individuals when possible, and action always, if it opposes the total welfare.

CHAPTER XXVIII

ECONOMIC MACHINERY OF GOVERNMENT

Resources of government.—All expenditures of government are as subject to economic laws with reference to consumption of wealth as are those of individuals. Actual result in welfare is the only reason for such expenditure. Hence the same tests of economy are applied. Government makes but few expenditures for the immediate purpose of reproducing and increasing wealth. So far as its investments sustain productive industry, and the products of that industry enter into the world's market, they are subject to the same economic laws of supply and demand that govern all production of wealth. If in any case they are not, it is because of government monopoly cornering the market, or because of unnatural conditions of government production undermining the market. In general, government is simply expending for the common welfare a part of the wealth produced by individual effort.

Its resources are in small part derived from fees for special services rendered to individuals of the community. Such are fees for registration of deeds and mortgages, and of the same nature, though for convenience of collection paid in a different way, is the revenue from sale of postage stamps and stamped envelopes. Revenue

may come from pay for certain special privileges or franchises established by license or patent. These are supposed to be not so much in payment for special service as for sharing in responsibility and cost of protection. Another source of revenue is in the shape of money penalty, or fine, for minor trespasses upon good order. Such revenues are accidental, and diminish as the government becomes more perfect. Under peculiar circumstances of opposition by citizens or bodies of citizens to the general order, government confiscates property used in such opposition. A good illustration of this is connected with smuggling, where the introducer of foreign goods opposes government in its revenue laws by fraud or violence, and suffers the confiscation of goods so introduced.

None of the foregoing sources of revenue, unless it be the license, and this is sometimes a mere method of taxation, can serve to any great extent the purposes of government. All government expenditures for general welfare must finally be met by some system of distributing the burden over all the people. This method of distribution is called taxation. The principal revenue is raised by taxation of possessors and producers of wealth, in anticipation of current public needs.

If for any reason government expenditures exceed its revenues, the government, like any individual, becomes a borrower. It may borrow by contract to pay at some future time for construction of buildings or machinery, or by issue of scrip in the shape of promises to pay at some definite or indefinite time in the future, or more distinctly still by sale of bonds, which are

definite certificates of indebtedness, negotiated like the notes of individuals in great banking centers. Yet all of these are only methods of postponing the taxation which must support the government in its necessary machinery. Government can live upon credit in the same way, and only in the same way, that individuals can. The economic reasons for such credit must be the same as in individual experience.

Principles of taxation.—Since taxation in general is simply a way of distributing expenses to those for whose benefit expenditure has been made, the first question is one of fairness in distribution. The benefits from government expenditure ought to be universal, but are not necessarily equal. Like all the good things of nature, the benefits of the government are not appreciated by all alike. No one would probably suggest the possibility of distributing the expenditure exactly in accord with advantage received. Wherever the service is distinctly personal, as in the regular mail service, an attempt is made to charge each person the average cost of the service. Even the large miscellaneous mail distribution at less than cost may be fairly borne by those who use the mail for personal advantage, since this is likely to be in proportion to the intelligent activity shown in correspondence. Some few taxes upon special commodities of questionable advantage to the multitude, like liquors and tobacco, are supposed to be paid by those who gain the only advantage received by anybody in protecting their use.

Some more general principle, however, must be found for adjusting the burden of general expenses so

that each individual will bear his share. If the burden belongs to all, it should rest fairly upon all. Hence equality is usually given as the first principle of taxation. But it is evident that in this case equality means equity, not a mathematical division by the number of taxpayers. The interpretation is therefore "according to ability." According to Professor Rogers, the student of economic history, "*Equality of sacrifice is the only honest rule in taxation.*" This means, in practice, that any system of taxation should be planned with distinct effort to distribute the common expenses according to the ability of different members of society to meet them.

It is evident that no exact gauge of ability is at hand. If the actual income of every citizen could be distinctly known, and the burdens of a dependent household clearly expressed, a basis for equal sacrifice, so far as wealth is concerned, might be reached. But no such basis has been or can be actually found. If found, it would not give an accurate gauge of sacrifice, because the actual wants for comfort of different individuals are so widely varied. Two distinct approximations toward this equity are found. The first is in the total annual consumption of the individual taxpayer, especially of such articles as meet wants above the mere maintenance of healthy existence. In this the government assumes that all will spend according to their ability. The second is in a total accumulation of property. In this the government assumes that every man saves for future consumption all that he gains above his present needs. Both assumptions are untrue in individual cases, and

only approximately true anywhere. In many instances the expenditure of a given year upon more continuous wants than ordinary, like a home or farm buildings, will count also as wealth laid by. So, in any combination of the two systems of taxation, the more thrifty and far-seeing will bear a double burden. Yet even this combination may not transgress the rule of equity, since such foresight is itself proof of ability.

To this first principle of equity we may add others, less fundamental, but equally important in practice. *Taxes must be sufficiently definite to be understood and provided for by every taxpayer.* This is needed for maintaining the interest of every citizen in both the necessity and the economy of public expenditures. *Taxes must be so levied and collected as to be conveniently paid.* This means that private enterprise shall be hindered as little as possible in making assessments, and that times and places of collection shall be suited to the convenience of taxpayers. *The collection of taxes must be by such methods as will involve least outlay, either in salaries of officials or in machinery of the collecting process.* These four principles of taxation were announced by Adam Smith more than a hundred years ago, and have commended themselves to students of the subject ever since. It is evident that the last three are more explicit methods for carrying out the first. Most briefly stated, they imply equity, definiteness, convenience of paying, and economy in collecting.

Most legislation with reference to taxes shows some effort to carry out one, if not all, of these requirements. It is evident that a tax may be conveniently

paid in connection with ordinary expenditures, and at the same time be very indefinite and quite inequitable. Many taxes upon articles of every-day use in the home are of this nature. A very equitable tax may be so inconvenient from its interference with private interests, and require so many officials for collection, as to make it a serious burden to all. Such a tax would be one levied upon net income, supposing it possible to discover the exact facts for such a levy. Taxes levied without consideration of these principles are defended as means of checking extravagance or vice, as equalizing other conditions of welfare, or as correcting inequalities from other existing methods of taxation. Even these last assume the necessity of equity in the entire system or group of systems.

Direct and indirect taxation.— For convenience of study, taxes are spoken of as either direct or indirect; that is, a tax may be levied upon one whose property or earnings must be reduced by the amount of the tax, or a tax may be levied upon one whose property when sold, or whose service when rendered to another, will be worth as much more as the burden of the tax he has paid. A poll tax, an income tax, a tax on the farm, or a tax on household goods and jewelry, is assumed to be paid by the owner or user, without reimbursement. But a tax on stock in trade — like the farmer's live stock — or upon the machinery of production or service — like railroads, insurance companies and banks — is assumed to be transferred as an additional expense to the one who finally enjoys the wealth.

It is easy to see that such a distinction is difficult.

Every owner of wealth will consider taxes connected with its possession a part of the cost of such wealth, and wherever possible in the conditions of the market will count a tax in the selling price. It is impossible to judge from the form of wealth or the nature of the service when the tax can be transferred to a final user. A farmer's wheat may be the source from which he pays the total cost of raising it, including taxes upon the land employed. If, in the condition of the wheat market, he has still a profit upon his management, he will assume that the wheat buyers have paid the taxes. If the market price is so low as to not cover the cost, he will emphasize the fact that he pays the taxes. Yet probably the fact is the same in both cases, that the owner of the land has his profits diminished by the actual amount of the tax. More strictly, the tax is taken from the rent of his land. In any case of over-production, when land gives no rent, the tax will be paid by the producer out of other income. So far, however, as farm products conform to the principle of cost of production in the tendency of prices, there will be a corresponding tendency to shift the tax upon the final consumer.

Thus direct and indirect taxes are not always distinguishable; but in the tax systems of the United States most state and municipal taxes are assumed to be direct, because levied upon persons and more permanent forms of property, while the taxes of the general government are by the Constitution indirect, unless levied upon the states according to population. They are in the form of customs or excise, in which some article of commerce or some service rendered gives a value upon

which the tax may be transferred. Thus the state, the county, the city and the school district levy upon assessment of property and enumeration of polls. The United States collects upon imported goods of various kinds, upon special articles of manufacture, upon persons or corporations carrying on particular business, and upon commercial transactions of various kinds.

Assessment of direct taxes.—Assessment implies an enumeration of property in the possession of supposed owners and an appraisement of its value. The officer making the assessment is under constraint of an official oath to give a fair valuation. The market price is supposed to control his judgment, and is usually explicitly named in law.

In actual practice in various states of the Union assessed valuation often falls as low as one-third or even one-fifth of a fair estimate at market value. This is brought about by several causes. Each assessor fears over-valuation, lest his district will bear too large a share of more general expenses; and his successor is inclined rather to lower than raise the standard of value, from neighborly interest. Even if the assessors of an entire county agree upon terms of valuation, they are together under the same influence with reference to state and special taxes. A more definite cause of under-valuation is the practice of exempting a certain limited amount of property from all taxes. If personal property worth $200 is exempt from taxation for every householder, the smaller the assessment for his total property, the larger in proportion is the exemption. Specific taxes at a fixed rate, for state or school or improvement pur-

poses, operate in the same way to force down the valuation of property in the entire state or district. In assessment of real estate even greater violence is sometimes done to equity. In newly settled portions of the country the valuation of land held in the name of non-resident owners is notoriously high. Often in cities the assessor is subject to political influences and social connections in such a way as to destroy all equity in taxation. The official oath attached to such assessments is a sham.

If all property of stated kinds were equally and fairly valued, the burden of taxation would be most fairly distributed as regards property owners. Any tendency to undervalue is sure to oppress the weaker part of these property holders. If the price of a horse is fixed at twenty dollars, when the average price is sixty, the more wealthy owner of horses whose average value is above the general average has a larger part of his property exempt than the poorer owner whose horses are below the average. In the same ratio all household goods and even farms and buildings are under-estimated.

In this connection it is proper to mention the exemption of certain property devoted wholly to public welfare and contributing alike to the good of all citizens. In every state there are multitudes of schools, created and sustained by gifts of benevolent men. These supplement and extend the work of the state for general enlightenment, and are wisely encouraged by exemption from the burden of taxation, because their entire income is devoted to the same ends which the state serves. Public libraries and churches, devoted to such general

enlightenment and moral growth, are wisely included in this exemption. Nobody suffers, but everybody gains, by the use of private property for such purposes. If in any way these institutions serve the private ends of individuals, those individuals become themselves property owners, subject to the same taxation as others. Such exemptions may extend even to art collections made by private funds, and to extensive grounds laid out in parks, provided they are open to the public and serve as a means of wholesome recreation and culture.

In general, however, specific exemptions of private property from any taxes lead to abuse of privileges, jealousies and popular dissatisfaction, which result in danger to government and harm to the people. Exemptions of property used for particular purposes, like a farmer's team, may be thought of as a bounty upon such means of production. But the effect is almost always to the disadvantage of the weak, and the practice gives a general encouragement to the disposition to escape taxes. Farmers, of all classes of people, are most interested in a fair and painstaking assessment of all forms of property. Their influence is most widely extended and far-reaching in its effects. The whole community should be led to realize the absolute necessity of fair taxation and prompt meeting of individual responsibility. Fraud in the treatment of taxes is a crime against society, whether it involves false swearing or not. It partakes of the nature of treason, and may well be subjected to severe penalties. Usually, however, a penalty in the shape of additional taxes and forfeiture of property by sale for taxes, with room for

redemption at considerable expense, are sufficient to secure a proper assessment and collection, if the community are really in earnest in resisting the fraud.

Indirect taxes.— The methods of indirect taxation by excise and custom duties have been familiar for ages. They are usually favored by politicians who dread the opposition of the people to taxation, because the collection is so incidental to ordinary expenditures as scarcely to be realized and never clearly measured. Few users of tobacco or strong drink have any distinct idea what portion of the cost represents the government revenue. Still less in drinking the cup of coffee, or sweetening it with sugar, does the person benefited weigh the tax he pays. It is doubtful if most of those who read this, actually know that sugar pays a tax, while tea and coffee do not, in our country.

So convenient is this mode of taxation that it forms the favorite mode of discrimination in favor of productive industries. A tariff of 50 per cent upon imported cloth may actually increase the price of similar cloths manufactured at home by nearly that amount, thus fostering cloth-making by a premium on the product, while only a few discover the added burden of the tax. Yet these modes of taxation are usually costly to the people. Even if free from complications with either preventing vice or fostering industry, they require a separate body of officials from those provided for direct taxation. They involve investment by every wholesale and retail dealer of extra capital in taxes, upon which extra interest and profit is expected. The actual consumer bears this extra burden with only partial realiza-

tion of its bulk. If duties are high, the temptation to smuggling and fraud becomes great, and a force of officials must be stretched around the borders of a country to prevent it.

Custom, or duty.—Duties are said to be either specific or ad valorem. Specific duties are a definite sum upon every pound, ton, yard or other unit of measure, applied to the article taxed. They are easily assessed, and misrepresentation or fraud is scarcely possible. Ad valorem duties are a certain rate per cent upon the invoice value of the goods. In these, frauds are abundant, and experts are required to prevent them. Specific duties are relatively heavy upon the consumers of goods of cheaper quality. A tax of 25 cents on each yard of cloth worth a dollar is five times as heavy as the same tax on cloth worth five dollars. Equalization is frequently attempted by combination of specific duties upon all goods of a certain character with ad valorem duties upon all such goods above a certain quality.

Excise collections.—The same difficulty is experienced in adjusting taxes by excise under our internal revenue system. Such revenues are largely collected through a sale of stamps, though the dealer himself may be required to pay a license fee, to secure the necessary inspection. Here, too, the tax is specific and bears most heavily upon the users of the poorest grade of goods. If attempt is made to grade it by quality, expensive machinery for preventing fraud is necessary. This is well illustrated in the list of officials required in connection with distilleries and bonded warehouses. Both the

manufacture and the sale of alcoholic liquors must somewhere be under the inspection of an expert officer. All this necessary expense of collecting must be borne by the consumers. The bonded warehouse itself must not be mistaken for a part of this machinery, though it is essential to the collection. It is simply a device by which the holder of manufactured liquors subject to sale can avoid the payment of a tax until the time of actual delivery. His warehouse, being under bonds to the government, is open only in the presence of the revenue officer, who carries one of the keys necessary to its opening. Without this the tax would have to be paid at time of manufacture, and interest on that amount, to greater or less extent, would finally be paid by the consumer. While this system protects essentially against fraud on the part of the owner alone, it does not protect against the weakness or wickedness of officials, and the temptation is sometimes enormous.

Peculiar taxes.—Aside from these general forms of taxation, peculiar devices are common. The stamps required on official papers or commercial transactions, involving checks, notes, mortgages and deeds, have been familiar at various times in our country, and are associated with the history of the world. These differ little from the practice of affixing stamps to patent medicines, cigars and other articles of trade; but instead of being attached to the article transferred they are affixed to the check or note or deed or bond employed in the transaction. These bear unequally, being proportionally heavy upon the people of small means, and are generally annoying in active business. They are frequently

favored, however, as being felt most by those who deal most in commerce.

The heavy taxes laid upon the consumption of alcoholic liquors and tobacco illustrate another device for making so-called luxury bear the heavier portion of taxes. It looks both ways, attempting to check luxurious living or vicious practices by a penalty for indulgence, and at the same time to secure a revenue as the result of such indulgence. Evidently in so far as it prohibits indulgence it is not a revenue measure; and in so far as it secures the revenue it does not prohibit indulgence. It is borne somewhat patiently, because each person feels that he can avoid the payment by ceasing to indulge himself. The universal tendency is to make it purely a revenue measure by fixing the tax just where it will not retard consumption in any material degree, and in some instances will give a quasi dignity to the dealer through his official license.

Taxation of credits.—A very common device adopted in most of the states is that of assessing credits as well as property. The majority of farmers favor the assessment of mortgages upon a valuation equal to, if not higher than, that upon farms. They forget that the ability to pay taxes from year to year comes out of the profit or rent from the farm; and if both farm and mortgage are taxed, the adjustment comes through the interest which the mortgage must bear. To illustrate, a father sells his farm, worth $5,000, to his son, taking a mortgage for the entire value. If mortgages are assessed, the value of that farm for all purposes of taxation is $10,000; and yet the living of both father and

son, taxes included, comes out of that farm's production. The two have no more property and no more ability after the transaction than before. Thus the mortgaged farms in every community where mortgages are taxed bear double burden.

In a similar way the taxation of any form of notes or bonds or stock doubles the assessment in form without increasing the abilities. *The actual property in use will finally bear the burden of both assessments.* The road-bed and rolling stock of a railway are property whose value is readily estimated. The actual ownership is in a corporation which may be distinctly taxed. Certificates of stock are individual titles in that corporation whose property has already been taxed. Its outstanding bonds are simply claims against that corporation, to be paid out of that property which has already been taxed. So every note, being evidence of debt simply, is not a representative of property, but simply a claim against property supposed to exist somewhere else. It may be an absolute fiction, in being a claim against property only hoped for. The result of all efforts to treat certificates of indebtedness as personal property are hardship to debtors and apparent fraud on the part of many creditors. Even though the creditor escapes taxation by hiding his possession of a mortgage, the possibility of its being taxed is always counted in his bargain with the borrower as an important element in interest. The experience of those states in which such taxation has been abolished proves that lower rates of interest are sure to follow.

Income taxes.— A favorite device in some countries,

and often advocated in this, is a direct tax upon incomes above a certain amount, graduated so as to give a much larger rate upon large incomes than upon more moderate ones. The most obvious reason for such a distinction against the large incomes is the evident failure of our national system of taxation to distribute the burden according to ability. It is evident that the expenditures of the very wealthy for such articles as bring revenue to the government are not in the same proportion to their income as the expenditures of the poorer people are to their incomes. A further reason is based upon the supposition that large incomes involve a considerable unearned increment, in the shape of rent or extraordinary profits, because of accidental opportunity or the crowding of population. An income tax, carefully graduated, is supposed to cause such extra privileges and opportunities to bear a fair share of government expenses.

There are several difficulties in administering such a tax which have stood in the way of its general and permanent adoption. No one has yet devised a certain or fair method of estimating income. The peculiarities of any business or employment make great variation in the ability given by a certain income in dollars and cents. The business man in a small town, with an income of $5,000, might live in relative luxury, and still have a surplus for investment in his business. The same man, attempting business in a large city, might, even with an income of $10,000, find it barely possible to keep up appearances. The income of farmers is largely in provisions and personal privileges from use of

teams, etc., never counted in dollars and cents, while the village mechanic pays from his measured income for all such comforts, or goes without them. The actual, necessary expenses of the business of a professional man in the way of books and travel are as essential to his business as are farm implements and live stock to the farm; yet no one counts such expenses as a subtraction from the income. A teacher promoted to a higher position is at once subjected to extraordinary expenses, and may be less able with a higher salary to meet the requirements of his new life than he was with a lower salary to meet the less expensive requirements.

Another principal difficulty is the unpopularity of such a tax from its necessary interference with private business. The country will be almost certainly more divided along lines of wealth over an income tax than over anything else. On the part of the wealthy it seems an effort of the people to take from them actual property rights. On the part of the poorer classes it fosters the assumption that the more wealthy are unjustly so. In the nature of the case, it is an arbitrary adjustment without the possibility of establishing exact reasons for any distinctions made. Finally, since such distinctions are liable to be varied from time to time, an income tax requires some nice adjustment as to the nature of the income. An income from the sale of property is entirely different in character from the income made by interest on the same property. One is a part of permanent investment, the other is the result of productive investment. One destroys the principal if consumed, the other adds to the principal. Yet no one

could arrive at the actual, natural income, without a most intricate system of book-keeping open to public inspection. For without public inspection the temptation to fraudulent returns, under the feeling that the tax is unjust, is so strong as to be demoralizing.

Inheritance taxes.—A device much employed for making large accumulations of wealth bear a larger portion of the community's burdens is a heavy tax upon inheritance. Since such inheritance requires the guardianship of law for security of transfer, government is suffered to take a liberal fee for such transfer. Moreover, the inheritor is assumed to have no such property interest in what has been accumulated by another as to claim that he can be wronged if government takes a portion. It is defended also by socialists on the ground that large estates are dangerous to the general welfare.

Some facts bear upon the opposite side, and are worthy of consideration. A large estate is the accumulation of enterprise and industry on the part of a man of more than ordinary abilities. The presumption is in favor of following his judgment in making that useful after his death. Most frequently it is employed in some huge industrial machine, which the public cannot manage, but can destroy by even taking a portion from it. One of the main stimulants to all accumulation is the provision for the future wants of a family. If the state takes the accumulation, it also takes the responsibility for the successors in the family line. Wherever it is applied, it is felt to be a heavy burden upon the community at large. If the state interferes with the freedom of a testator, the chances are that few estates will

be accumulated, and wasteful methods of expenditure, diminishing the power of the entire community, will surely follow. Moreover, evasions of the inheritance tax are comparatively easy, and are likely to be adopted extensively by the holders of large estates. The very rich can give away a large portion of their property before death without material suffering. Only the moderately wealthy are obliged to hold on to their possessions until death. Any wealthy man can dispose of his wealth during his lifetime, and still retain its income, by giving it away, subject to an annuity. To prevent this the law would have to be extended with intricate inspection to cover all transfers of property. Let no one be deceived into feeling that this is a simple and easy way of saddling government expenses upon the rich.

Special taxes.—A multitude of minor devices are worthy of brief consideration. An occupation tax on business men is easily levied, but bears unequally upon the original payers, and in the end falls most heavily upon the poorest. A house tax, measured by the number of rooms, or the number of windows, or the number of fireplaces, has been supposed adjustable to actual income of the possessors. But it bears very heavily upon men in certain professions requiring house-room, and forces the poor into narrow and crowded quarters. The rent of the poor is necessarily a larger proportion of their living expenses than that of the well-to-do. It is a serious hardship when a tax is levied upon that which a man cannot possibly save.

A tax upon retail dealers and peddlers is frequently

advocated, as tending to prevent the increase of unnecessary middlemen and wasteful competition. Yet this, too, bears heavily upon the poor, since it crowds out also those who are satisfied with small profits and deal in small sales. Even a tax upon pawnbrokers, whose profits are supposed to be extraordinary, gives occasion for a sharper grinding of the poor. A study of all these devices will lead one to the conclusion that a tax upon property only, based upon a fair valuation and paid by the controller of the property, is fairest to the whole community and leads to truest conceptions of the relation of property to public expenditure. It is certainly best for rural welfare.

A single land tax. — A brief consideration must be given to a proposed system of taxation, commonly known as the single land tax. The proposition is to tax all lands, including building sites, to such an extent as may be necessary to meet all public expenditures. The lands are to be valued for this purpose at the rent they will bring, independent of all improvements. The supposition is that such an income is due entirely to the effect of crowding population, and therefore belongs to society as a whole rather than to the individual possessing it. In fact, if the state were to consume the entire economic rent, it would take only, it is said, what already belongs to the community. Other supposed advantages of the single tax system are the reduced expense of assessment and collection, together with incidental effects in promoting production by removing burdens from capital, in preventing the holding of land unproductive, possibly in equalizing wealth

and diminishing greed for landed property, while the poorer, cheaper agricultural lands, having no rent value, would be relieved of all burden. These are essentially the views maintained by the followers of Henry George, the leading champion of such taxation. It is claimed, further, that the poor in crowded cities would be better housed, since buildings would bear no taxation, and holders of city lots would make them productive through construction of buildings without adding to their burden of taxation. It is claimed also that such taxation would be finally distributed, and fairly distributed, among all the consumers of products affected by land possession, as well as all even indirectly making use of the land. Since food and shelter are universal, all would contribute, so far as they are self-dependent, according to food consumed and space occupied.

These statements are somewhat inconsistent with each other. If rent is of such a nature, as assumed at the beginning of the argument, that it cannot directly affect all values because it depends upon those values for its existence, a tax levied upon it cannot be distributed but rests wholly upon the landholder. If, on the other hand, a tax on land is distributed among all consumers of its products, there is no economic rent, but the burden rests upon the consumers alone, according to the amount consumed, subjecting this tax to the objection against all indirect taxes, that the poor bear the heavier burden.

It is evident, too, that such a tax must bear heavily upon the unthrifty. The valuation of farms must be

made by an expert judge of what farms similarly situated ought to produce. A farm valued at $500 annual rent might, under thrifty management, produce twice as much as under unthrifty management. The tax, under thrifty management, could be easily paid; under unthrifty management, it would ruin the manager. This certainly does not levy the tax according to ability. It also bears heavily upon the enterprising young farmer whose capital is small, as compared with the long-established farmer with accumulated capital. The man weak in capital would bear as heavy a burden as the strong.

Again, it provides no system of taxation in newly settled communities where land has practically no value except from improvements. Unless a fictitious value be given to such land for purposes of taxation, as sometimes happens with reference to non-resident landholders, no government could be maintained.

Finally, since under this system government assumes a control over landed estates, from which it exempts all other forms of property, it tends toward the nationalization of land, which would necessarily destroy the system itself. For if government claims all increment from land production, land ceases to be property and does not pass from owner to owner at a market value: then government fixes arbitrarily the rental of space, and taxation is distributed upon a new principle. If a new principle were not to be assumed, there could hardly be a device conceived more likely to make the rich richer and the poor poorer. Farmers, of all men, are best situated to realize the unequal workings of a single land tax system.

Government debts.—An important part of government machinery is connected with its ability to make use of borrowed capital. Under the pressure of heavy expenditures in case of war, or in undertaking permanent improvements in a new country, or in carrying on various enterprises for common welfare, the demand for means is greater than the supply from ordinary modes of taxation. Not even the special devices of war taxes can meet at once the burdens of a defensive war. The rightfulness of such expenditures upon the credit of the government depends upon the object to be secured. The expense of the war which defends and preserves the future home of posterity may properly be borne in part, at least, by posterity. The court house, the water works, or the electric plant, whose benefits will be shared by the people for a hundred years, may properly be so constructed that all the people benefited may share in the burden. Good economy requires the foresight which builds beyond mere present need. The danger is that expenditure made under expectation that others will pay may be wasteful, and often other reasons than actual needs in the interest of private speculation control.

Nevertheless, there is good reason for government debts; and every form of government, from the loftiest to the most insignificant, finds such indebtedness easy to contract. The smallest school district can issue scrip in payment of its teacher, or can issue bonds for the construction of its school-house. Only the general government, under our laws, can borrow by issuing due-bills in the form of legal tender notes. All of these certificates of indebtedness enter into the general commerce under

the common law of supply and demand, and bear an economic price proportional to the certainty of their final payment and the convenience of their use in commercial transactions. The exemption of national bonds, or even state bonds, from local taxation works no more hardship than the exemption of state property. Under ordinary circumstances the entire advantage of such exemption is gained by the state, and so by all the taxpayers of the state. The exemption of national bonds from every form of taxation prohibits interference with the government's privilege of borrowing when and where it can, and the advantage comes back to the people *in full* through the low rate of interest or the premium in price which such bonds bear. They are subject to fluctuations in value through their being a means of transferring floating capital between industries. Under a stable government, with a somewhat permanent debt, a holder of bonds is a sort of stockholder in the governmental wealth, with definite stated dividends rather than profits.

Such bonds have various effects upon a general industry of the country. While they lessen somewhat the immediate burdens of present productive industries, they may increase the burden of the same industries in a second generation. Their convenience in securing annuities for long series of years may diminish the enterprise of a community by fostering a class of non-producers, whose wealth is represented in the display of government buildings rather than in productive enterprises. Just so far as government employs the capital of the country through bonds, it diminishes the capital

which would otherwise find investment in productive employment. The danger of extravagance to even small communities, from the ease with which such government debts can be contracted, warrants the contrivance of strong constitutional limitations. Indeed, provision, not only against extravagant debt, but for reasonably prompt settlement, may well be required by constitutional law. All property holders, but especially land holders, are interested in preventing extravagant outlay by means of bonded indebtedness. Farmers must know that the burden will have to be borne, with all the natural additions, by the property they hold, and the value of that property will be lessened by whatever extra burden it bears.

Settlement of government debts.—The settlement of government debts is a matter of uncertain provision. In many instances there has been a tendency toward a permanent debt. The United States has shown a surprising capacity for making such debts for all sorts of purposes, but has also shown an equally surprising ability in payment. And yet examples are not wanting, even in our own country, of a tendency to indefinite postponement and a rapidly increasing burden, until settlement could be made only by compromise or a total repudiation. The effect of such bankruptcy of nation, state or municipality is like that of any failing enterprise, only more widely felt. The repudiation of a government debt affects the capital of the country like the confiscation of estates under ancient tyranny. It destroys the common faith, which is the basis for true productive industry. It takes the nation back into the

dark ages as regards its relation to the individual welfare of citizens. Every economic reason existing for the collection of private debts, and leading to government machinery for collecting such debts, has still greater force when applied to the debts of governments. The demoralization, widespread and destructive, which follows repudiation, or anything resembling it, cannot be outgrown for generations. The most plausible reasons for repudiation, except in cases of absolute fraud against the government, should have no weight with a citizen who cares for the welfare of his fellow-citizens and their progress toward that welfare, under the natural laws concerning wealth. A nation of robbers is safer to live in than a robbing nation.

CONCLUSION

It is clear that Rural Welfare, as far at least as it rests upon Wealth, is to be gained by careful study of laws of nature and human nature quite independent of mere wishes. The only way to improve the present situation of affairs in any community is to use the natural forces within reach to advantage. All the growth of the past is preparation for more growth and better fruit in the present and future. The farmer who knows most about the fundamental principles of property and property rights in society is most likely to best serve his community, as well as himself.

Still it is equally clear that the chief elements of Rural Welfare are not mere wealth. Wealth is but the material out of which the external machinery of welfare is formed. Every way essential to progress in any degree, it does not give the chief test of progress. No one is gaining the full use of his wealth until it is well spent for the welfare that is strictly personal,—health, wisdom and virtue. No society, however wealthy, has reached true welfare till all its members appreciate the higher welfare, and make wealth-seeking a means for securing it.

Rural communities can take advantage of many inexpensive ways of adding to their welfare without great wealth The natural surroundings of the country

home give development to ability and courage in children that are better than wealth. The same principles of thrift that are to be cultivated for the sake of material comforts apply to the larger welfare that a wise enjoyment of nature's gifts and nature's lessons may bring. The thrifty farmer comes nearest of all men to the ideal condition of the wise man, expressed in the wish, "Give me neither poverty nor riches." He can have enough to comfortably house, clothe and feed his family in the midst of surroundings as wholesome as the world affords. He can give his children, by the aid of their healthy bodies and strong hearts, as good opportunities for education as any can use. He has a natural leisure for self-culture in the use of papers and books, if he tries to use it, and his relations with neighbors of similar abilities are more human, more true, than those found in any other circumstances. If farmers live as they ought, their homes are centers of true hospitality, true sympathy for human rights; and with a little more constant care for neighborly spirit would come nearest to giving the true foundation for manly and womanly character in children, and so in their parents.

A family of eight children grew up on a farm of little more than one hundred acres, chopped out of the wilderness. Father and mother worked hard and strove thriftily to make their children useful. A school was the first requisite, even though it must be taught in the one room that was kitchen, library and parlor, if not the bedroom, too. The church was equally important, though it took the choicest lot on the farm for

its location. Newspapers and wholesome books were as needful as daily bread. The household was a center of cheer and interest for the entire community. The first Sunday School and the first Temperance Society of all that new country were organized there. The trend of national life towards higher ideals of justice for all humanity was first recognized there, so that three of the four votes cast in that township for the first liberty ticket were connected with the same household. The whole world came nearer these youth because they learned about it.

When opportunity came for larger growth in college training, all but the oldest boy and the oldest girl sought it eagerly. These made the old homestead and a neighboring farm worthy centers of the same true influence. The three sons and the three daughters whose education lifted them to a little wider field of influence are all recognized as having been leaders in this country, and their names are cherished by thousands who have known their work. The thrift that has made them useful in the truest welfare of the world was cultivated and trained on that little farm.

The little farm became itself an evidence of thrift, attractive in its beauty as well as in its productiveness. It gave to the father and mother a satisfactory living till both died, the mother at eighty, and the father at nearly a hundred. Riches they never needed, for they had enough with the blessings of children and children's children scattered through the world. The farm is still in the family, doing its good work for the fourth and fifth generations, in the same wholesome

way and with promise of never-ending welfare. A little wealth well used means enormous welfare.

The farm homes of America will be the seat of America's welfare if their occupants know all they can of the thrift that gives power, and do as well as they know. Farmers who think carefully and earnestly will not expect to overturn nature as it is, but to use it for all it is worth. This little book is intended to help toward such a use of power and wealth as may bring genuine welfare. Its author hopes in this way to pay in part the debt he owes to the little farm.

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